## MAINEILE



Infrastructure, environment, facilities

LDEQ RECEIPT

2007 JUL 13 AM 9 21

Mr. Bijan Sharafkhani, P.E.
Administrator
Waste Permits Division
Office of Environmental Services
Louisiana Department of Environmental Quality
P. O. Box 4313
Baton Rouge, Louisiana 70821-4313

JUL 1 3 2007

**ENVIRONMENT** 

ARCADIS U.S., Inc.

Baton Rouge Louisiana 70816

Tel 225.292.1004

Fax 225,218,9677

www.arcadis-us.com

10352 Plaza Americana Drive

Subject:

Submittal of Final Copies of Permit Renewal Application Storm Water Oil/Water Separator Treatment System Chevron Oronite Company, LLC, Belle Chasse, Louisiana Agency Interest No. 1708/PER20050009 GD-075-1511/Permit No. P-0112-A-1

Dear Mr. Sharafkhani:

On behalf of our client, Chevron Oronite Company, LLC (Chevron), ARCADIS is submitting six copies of the complete permit application for the above referenced facility. These copies were requested by the Louisiana Department of Environmental Quality - Waste Permits Division in a letter dated June 21, 2007.

Should you have any questions or require any additional information, please contact Mr. John Ellis at (225) 292-1004 or Mr. Troy Sampey of Chevron at (504) 391-6314.

Sincerely,

ARCADIS U.S., Inc.

ohn Ellis PG

Senior Scientist/Geologist

Rudy J. Guichard

Senior Vice President/Area Manager

JE:RJG:egp

Attachments

Imagine the result

Date:

original to

13 July 2007

Contact:

John Ellis

Extension:

208

Email

john.ellis@arcadisus.com

Our ref:

LA002582.0002.00001

Chevron/2582.2/C/3/egp



# **Oronite**





## SOLID WASTE PERMIT RENEWAL APPLICATION FOR STORM WATER TREATMENT SYSTEM

CHEVRON ORONITE COMPANY, LLC
OAK POINT PLANT
BELLE CHASSE, LOUISIANA
AGENCY INTEREST NO. 1708
PER20050009
GD-075-1511
P-0112-A-1
13 July 2007

**VOLUME I OF II** 



## SOLID WASTE PERMIT RENEWAL APPLICATION FOR STORM WATER TREATMENT SYSTEM

## TABLE OF CONTENTS

## **VOLUME I**

INTRO	DUCT	TON	I-1
§519.	Part l	: Permit Application Form	519-1
§520.		oliance Information	
•	A.	All applicants for solid waste permits shall comply with the requirements of LAC 33:I.1701	520-1
§521.	Part l Dispo	II: Supplementary Information, All Processing and osal Facilities	521-1
	A.	Location Characteristics	521-1
	B.	Facility Characteristics	521-6
	C.	Facility Surface Hydrology	521-9
	D.	Facility Geology	521-10
	E.	Facility Subsurface Hydrology.	521-13
	F.	Facility Plans and Specifications.	521-17
	G.	Facility Administrative Procedures	521-21
	H.	Facility Operational Plans	521-24
	I.	Implementation Plan	521-30
	J.	Facility Closure	521-31
	K.	Facility Post-Closure	521-35
	L.	Financial Responsibility	521-36
	M.	Special Requirements	521-37
§523.	Part 1	III: Additional Supplementary Information	523-1
§709.	Stand	dards Governing All Solid Waste Disposal Facilities e I and II)	
	A.	Location Characteristics	709-1
	B.	Facility Characteristics	709-3
	C.	Facility Geology	709-5
	D.	Implementation Plans	709-7
	E.	Groundwater Monitoring	709-8

§713.	Stand	ards Governing Surface Impoundments (Type I and II)	713-1
_	A.	Facility Surface Hydrology	713-1
	B.	Facility Plans and Specifications	713-2
	C.	Facility Administrative Procedures	713-4
	D.	Facility Operations	713-7
	E.	Facility Closure Requirements	713-12
	F.	Facility Post-Closure Requirements	
§727.	Finan	cial Assurance	727-1
	A.	Financial Responsibility During Operation and for Closure and Post-Closure Care	727-1
	B.	Financial Responsibility for Corrective Action for Type II Landfills	727-25

## SOLID WASTE PERMIT RENEWAL APPLICATION FOR STORM WATER TREATMENT SYSTEM

# TABLE OF CONTENTS (continued)

### **FIGURES**

1	Site Location Map
2	Storm Water Drainage Map
3	FEMA Q3 Flood Zone Map
4	Existing Land Use
5	2004 Color Infrared Aerial Photography
6	National Wetland Inventory Map
7	Census Map of Area Located Within a 3-Mile Radius
8	Oil/Gas Well Location Map
9	Location of Light Poles
10	Location of Fire Water Piping
11	Site Map
11a	Chevron Drawing MF-75000-22
12	Detail of Storm Water Separator Ditches and Impoundment Basin
13	Wastewater Treatment Schematic
14	Site Wide Monitor Well Location Map and LPDES Outfall Locations
15	Cross-Section Locations
16	Cross-Section B-B' and C-C'
17	Cross-Section D-D'
18	Regional Cross Section
19	Upper Clay Zone Isopach Map
20	30-Foot Zone Isopach Map
21	Top of 30-Foot Sand Structure Map
22	30-Foot Zone Potentiometric Map, November 2003 Event
23	30-Foot Zone Potentiometric Map, May 2004 Event
24	30-Foot Zone Potentiometric Map, November 2004 Event
25	30-Foot Zone Potentiometric Map, May 2005 Event
26	Upper Clay Zone Potentiometric Map, May 2006 Event
27	200-Foot Zone Potentiometric Map
28	400-Foot Zone Potentiometric Map
29	700-Foot Zone Potentiometric Map
30	Well Diagram
31	Points of Compliance

#### **APPENDICES**

Α	Copy of Lease Agreement
В	Proof of Publication in Parish-Wide and State-Wide Newspapers
C	Signatory Authority
D	State Historic Preservation Office (SHPO) Letter
E	Louisiana Department of Wildlife and Fisheries Letter
F	U.S. Army Corps of Engineers Letter
G	Plan to Prevent Adverse Effects on Environment from Water Wells on Property

## SOLID WASTE PERMIT RENEWAL APPLICATION FOR STORM WATER TREATMENT SYSTEM

## TABLE OF CONTENTS (continued)

Н	Emergency Response Manual
I	Copy of Louisiana Pollutant Discharge Elimination System Permit
<b>VOLUME</b>	EII
J	24-Hour/25-Year Rainfall Map
K	Geologic Summary of Aquifers in New Orleans, Louisiana
L	Lithologic Logs, Well Construction Diagrams, and Geotechnical Investigation Results
M	Monitor Well Plug and Abandonment and Water Well Registration Forms
N	Hydraulic Conductivities
О	Certification of Solid Waste Permit
P	Groundwater Sampling Plan
Q	Example of an Ecology Area Turnover Report
R	Solid Waste Facility Minimum Personnel
S	Laboratory Results of Waste Stream Analysis
T	Formal Operator Training Program
U	Operation and Maintenance Plan for the Treatment Facility
V	Closure Schedule and Estimated Closure Cost
W	Annual Report
X	Financial Assurances Documents
Y	Correspondence

#### Introduction

The Louisiana Solid Waste Permit Renewal Application is hereby submitted for Chevron Oronite Company, LLC (Chevron's) Oak Point Plant located in Belle Chasse, Louisiana, in accordance with LAC 33:VI.315.I.

The application was originally submitted on January 18, 2006. The 1st Notice of Deficiency (NOD) on the permit renewal application was issued by the Louisiana Department of Environmental Quality (LDEQ) in letter dated August, 9, 2006. Chevron requested a 60-day extension in a letter dated August 22, 2006, which was subsequently approved by LDEQ in a letter dated September 11, 2006. An additional extension request was made by Chevron in a letter dated October 5, 2006, which was subsequently approved by LDEQ in a letter dated October 10, 2006. The response to the 1st NOD letter was submitted to the LDEQ on December 5, 2006. Based on these responses LDEQ issued a 2nd NOD letter on February 21, 2007. The response to the 2nd NOD letter was submitted to LDEQ on April 24, 2007. In a letter dated June 21, 2007, LDEQ requested six bound copies of the complete permit application for review, which will be used to determine if the application is technically complete. Relevant correspondence is provided as Appendix Y of the permit application.

Chevron was issued Standard Permit P-0112 to operate the Storm Water Treatment System (Storm Water Impoundment Basin, and Storm Water Oil/Water Separator and Interconnecting Ditches) located at Range 24 East, Township 15 South, Section 2 in Plaquemines Parish by the Secretary on June 20, 1986. An amended Standard Permit (Permit No. P-0112-A-1) was issued on July 28, 1986. The LDEQ issued an order authorizing commencement of operations on March 12, 1987. On January 31, 1994, at the request of LDEQ, Chevron submitted a Mandatory Modification for the Storm Water Treatment System to the Agency. Chevron submitted a Minor Modification for Pump Station Expansion (Minor Modification) to LDEQ on November 12, 2004. Subsequent to the November 12, 2004, submittal, an addendum to the Minor Modification dated January 31, 2005, was submitted to LDEQ. The Minor Modification was approved in an LDEQ letter dated March 18, 2005. Relevant correspondence is attached.

The solid waste facilities on site at the Oak Point Plant are integral parts of the plant's storm water runoff management system. The existing Storm Water Oil/Water Separator, the Storm Water Impoundment Basin, and the Interconnecting Ditches leading from the Separator to the Basin are interconnected parts of the same Storm Water Treatment System. Throughout the permit application, these three interconnected parts of the Storm Water Treatment System will be discussed as one facility.

Chevron is requesting a change in the groundwater monitoring parameters for the unit. Analysis of total phenolics by Method 9066 will be removed from the program and analysis of phenol by Method 8270 will be added. Additionally, volatile petroleum hydrocarbons and extractable petroleum hydrocarbons will also be added to the constituent list. There are no other modifications proposed at this time and the operation of the unit is essentially the same as described in the original application and 1994 Mandatory Modification.

# CHAPTER 5 - SOLID WASTE MANAGEMENT SYSTEM SUBCHAPTER C - PERMIT APPLICATION

## §519. Part I: Permit Application Form

The applicant shall complete a standard permit application Part I Form (LAC 33:VII.3003). The following subsections refer to the items on the form requiring that information:

A.	Applicant (Permit Holder): Chevron Oronite Company, LLC	
В.	Facility Name: Oak Point Plant	
C.	Facility Location/Description: 10285 Highway 23 South, Belle Chasse, Lo	uisiana 70037
D.	Location: Section <u>2</u> Township <u>15-S</u> Range <u>24-E</u> Parish: Plaquemi	nes
	Coordinates: Latitude – Degrees 29 Minutes 48 Seconds Longitude – Degrees -90 Minutes 00 Seconds	<del></del>
E.	Mailing Address: 10285 Highway 23 South P.O. Box 70 Belle Chasse, Louisiana 70037	
F.	Contact: Troy Sampey, Environmental Specialist	
G.	Telephone: (504) 391-6314	
H.	Type and Purpose of Operation: (Check each applicable line)	
	Type I Industrial Landfill Industrial Surface Impoundment Industrial Landfarm	
	Type I-A Industrial Incinerator Waste Handling Facility Industrial Shredder/Compactor/Baler Industrial Transfer Station	

	Type II		
	Sanitary Landfill		<del></del> _
	Residential/Commercial Surface Impor	ındment	<del></del> _
	Residential Commercial Landfarm		<del></del>
	True II A		
	Type II-A Residential/Commercial Incinerator W	esta Handling Facility	
	Residential/Commercial Shredder/Com		
	Residential/Commercial Transfer Station		<del> </del>
	Residential/Commercial Refuse-Derive		<del></del> -
	Residential/Commercial Refuse-Delive	00 1 001	<del></del>
	Type III		
	Construction/Demolition-Debris Lands	ill	
	Woodwaste Landfill		
	Compost Facility _		
	Resource Recovery/Recycling Facility		
	Other: Describe		
	Storm Water Treatment System consisti Oil/Water Separator, and Interconnecting		nent Basin,
	Site Status: Owned _√_ Leased _	Lease Term Yes	ars
	Portions of the facility are owned and po for 5 years, beginning on August 15, 1973 18 successive 5-year terms (a total of 90 y of the lease.	3, with the option to renew the	lease for
•	Operation Status: Existing \( \frac{}{} \)	Proposed	
ζ,	Total Acreage 90.1 Processing Acr	eage Disposal Acr	eage <u>4.1</u>
٠.	Environmental Permits: (List)		
	Unit	Permit Type	Permit Number
	1. Process Area Contact Storm Water	LPDES (LDEQ)	LA0005738
	2. Noncontact Storm Water	Multi-Sector General (LDEQ)	LAR05M735
	3. Storm Water Construction	LPDES (LDEQ)	LAR 05M735

M. Conformity with Regional Plans. Attach letter from the Louisiana Resource Recovery and Development Authority (LRRDA) stating that the facility is an acceptable part of the state-wide program. [NOTE: In accordance with R.S. 30:2307.B, LRRDA authority does not apply to solid waste disposal activity occurring entirely within the boundaries of a plant, industry, or business which generates such solid waste.]

N	/A.	

N.	Zoned:	Yes	<u> </u>	No		Zoning	Requested
----	--------	-----	----------	----	--	--------	-----------

Zone Classification: I-3 "Heavy Industrial"

[NOTE: If zoned, include zoning affidavit and/or other documentation stating that the proposed use does not violate existing land-use requirements.]

O. Types, Quantities, and Sources of Waste:

	Proces	ssing	Disposal		
	On-Site	Off-Site	On-Site	Off-Site	
Residential	NA	NA	NA	NA	
Industrial	0 tons - 0%	0 tons – 0%	Max 3 wet tons/wk - 100%	0 tons - 0%	
Commercial	NA	NA	NA	NA	
Other	NA NA	NA	NA	NA	

- P. Service Area: The facility does not receive off-site waste.
- Q. Proof of Operator's Public Notice. Attach proof of publication of the notice regarding the permit application as required in LAC 33:VII.513.A;

See Appendix B.

R. Certification: I have personally examined and am familiar with the information submitted in the attached document, and I hereby certify under penalty of law that this information is true, accurate, and complete to the best of my knowledge. I am aware that there are significant penalties for submitting false information, including the possibility of fine and/or imprisonment. [NOTE: Attach proof of the legal authority of the signee to sign for the applicant.]

Typed Name and Title: M. H. Burnside, Americas Regional Manager

Appendix C provides proof of the legal authority of the signee to sign for the applicant.

## §520. Compliance Information

A. All applicants for solid waste permits shall comply with the requirements of LAC 33:I.1701.

Chevron completed the "Addendum to Permit Applications per LAC 33:VII.I.1701" form. It is included right after this citation, along with the certificate from the Secretary of State required by the form.

edia Type (o zardous Wa lid Waste diation Lice	aste ☐ Air ☐ ☑ Water ☐	Agency Interes Is this a copy o If yes, indicate If yes, indicate	f a previo	usly submitt al submittal	date:	] No [	⊠
. 1	t of Environmental Quality Permits Division P.O. Box 4313 ge, LA 70821-4313 (225) 219-3181	Addendum to	per		olications		LDEO
Please	Company Name	<u> </u>		⊠ Ovner	For Perm	its Division	Use Only
Type Or	Chevron Oronite Company, LLC	g <sup>.</sup>		⊠ Operator			
Print	Parent Company (If Company N Chevron Corporation	ame given above is a division)					
	Plant name (if any)	<del> </del>					
	Oak Point Plant						
	Nearest town Belle Chasse	Parish where k					
<u>SWW</u> ☐ Pe	ermits in Louisiana. List -LAG541343; Injection ermits in other states (list ou owe any outstanding to	Wells - 96-08 WD; M t states): None	ulti Sect	or General	Permit - LAF	<u></u>	<u>735</u> 
If yes	, please explain.						<del></del>
your of State.  Certifica I certify, statement informati		FRegistration and/or C isiana and United State tion and belief formed	ertificate es law wl after rea	e of Good S nich provid sonable in	Standing from e criminal per	the Sonaties	for false
	ponsible Official		1 Fee	·	In.	ate.	7in 7
Name M H	Burnside		City Belle	Chasse	L.	ate 4	Zip 70037
Title			Busi	ness phone		***	
	cas Regional Manager	18: 18:		391-6100 sture of respons	ible official(e)		
Compa	any on Oronite Company, LLC	西野   1   1   1   1   1   1   1   1   1   1	<sub>2180</sub>	aure of respons	(a)	6	
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Street	or P.O. Box		1	•			



SECRETARY OF STATE

As Secretary of State, of the State of Louisiana. I do hereby Certify that

an Application for Certificate of Authority of

#### CHEVRON ORONITE COMPANY LLC

Domiciled at WILMINGTON, DELAWARE, was filed in this Office on July 06, 2000,

I further certify that no certificate of withdrawal has been issued.

In testimony whereof, I have hereunto set my hand and caused the Seal of my Office to be affixed at the City of Baton Rouge on,

Jox. H. Fillen

MBE 349612279 Secretary of State



## §521. Part II: Supplementary Information, All Processing and Disposal Facilities

The following information is required in the permit application for solid waste processing and disposal facilities. All responses and exhibits must be identified in the following sequence to facilitate the evaluation. Additionally, all applicable sections of LAC 33:VII. Chapter 7 must be addressed and incorporated into the application responses. If a section does not apply, the applicant must state that it does not apply and explain why.

- A. Location Characteristics. Standards pertaining to location characteristics are contained in LAC 33:VII.709.A (Type I and II facilities), LAC 33:VII.717.A (Type I-A and II-A facilities, and LAC 33:719.A (Type III facilities).
  - 1. The following information on location characteristics is required for all facilities:
    - a. Area Master Plans. A location map showing the facility, road network, major drainage systems, drainage-flow patterns, location of closest population center(s), location of the public-use airport(s) used by turbojet aircraft or piston-type aircraft, proof of notification of affected airport and Federal Aviation Administration as provided in LAC 33:VII.709.A.2, location of the l00-year flood plain, and other pertinent information. The scale of the maps and drawings must be legible, and engineering drawings are required.

A Site Location Map (Figure 1) identifies the Chevron Oronite Company, LLC (Chevron), Oak Point Plant and the Oak Point Plant Storm Water Treatment System on Louisiana State Highway 23, approximately 3 miles south of Belle Chasse, the population center closest to the site. The map also identifies the road network, major waterways, and other pertinent topographical survey features. The airport illustrated on the map is part of the Belle Chasse Naval Air Station-Joint Reserve Base and is not a public-use airport. The Storm Water Treatment System is not within 10,000 feet of any public-use airport.

As depicted on Figure 1, the Storm Water Treatment System, which consists of a Storm Water Impoundment Basin, an Oil/Water Separator, and Interconnecting Ditches, is located in Section 2, Township 15 South, Range 24 East in Plaquemines Parish, Louisiana. It is located to the west of the Oak Point Plant, which is situated east of Louisiana State Highway 23 at an elevation that varies from 6 feet mean sea level (MSL) on the west to 9 feet MSL on the east. The Oil/Water Separator and front ditch are located within these limits at the western boundary. The Storm Water Impoundment Basin and the Interconnecting Ditches are located to the west of the highway at 0 feet MSL.

Figure 2 is a drainage system map. Surface water runoff from process areas within the Oak Point Plant is collected and treated in a powdered activated carbon treatment (PACT) unit and is discharged under the Louisiana Pollutant Discharge Elimination System (LPDES) permit. The plant boundary is surrounded by a dike and levee system that controls run-on and runoff. Surface water runoff from non-process areas is

directed to the Storm Water Treatment System. After treatment, effluent from the system is discharged to the Mississippi River as authorized by the LPDES Permit.

The Oak Point Plant is protected by the U.S. Army Corp of Engineers' (USACE's) levee system and is not within the 100-year floodplain. The Storm Water Treatment System is further protected by the Louisiana State Highway 23 roadway and is not located within the 100-year floodplain. Both the plant and the Storm Water Treatment System are located within the limits of the 500-year floodplain according to the Federal Emergency Management Agency (FEMA) Q3 Flood Zone Map as illustrated on Figure 3.

b. A letter from the appropriate agency or agencies regarding those facilities receiving waste generated off-site, stating that the facility will not have a significant adverse impact on the traffic flow of area roadways and that the construction, maintenance, or proposed upgrading of such roads is adequate to withstand the weight of the vehicles.

The Storm Water Treatment System does not receive any waste generated off site; consequently, this section is not applicable.

- c. Existing Land Use. A description of the total existing land use within 3 miles of the facility (by approximate percentage) including, but not limited to:
  - i. residential;
  - ii. health-care facilities and schools;
  - iii. agricultural;
  - iv. industrial and manufacturing;
  - v. other commercial;
  - vi. recreational; and
  - vii. undeveloped.

Table 1 identifies the type of land use within 3 miles of the Storm Water Treatment System by number of acres and percentage. The data in Table 1 was generated from the United Stated Geological Survey (USGS) Gap Analysis Program (GAP) Data and USGS Digital Raster Graphics Bertrandville, Louisiana, quadrangle. The data was obtained in January 2006 from the <a href="https://www.nwrc.usgs.gov">www.nwrc.usgs.gov</a> Internet web page. Figure 4 depicts the existing land use within the 3-mile radius.

Table 1 - Land Use Within 3 Miles of the Storm Water Treatment System

Type of Land Use	Acres	Percent of Total Acres
Residential	2,044.56	9%
Health-care facilities, school, and other public/semi-public	1,379.95	6%
Agricultural	545.86	2%
Industrial and Manufacturing	1,238.22	5%
Commercial	14.07	0%
Recreational	153.35	1%
Undeveloped	17,760.13	77%
Total	23,136.14	100%

d. Aerial Photograph. A current aerial photograph, representative of the current land use, of a 1-mile radius surrounding the facility. The aerial photograph shall be of sufficient scale to depict all pertinent features. (The administrative authority may waive the requirement for an aerial photograph for Type III facilities.)

Figure 5 displays existing land use over the most currently available aerial photograph (2004) within a 1-mile radius of the Storm Water Treatment System. The photograph is displayed at a scale sufficient enough to depict all the pertinent features within a 1-mile radius.

- e. Environmental Characteristics. The following information on environmental characteristics:
  - a list of all known historic sites, recreation areas, archaeologic sites, designated wildlife-management areas, swamps and marshes, wetlands, habitats for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility perimeter or as otherwise appropriate;

Table 2 lists all of the environmental resources found within a 1,000-foot radius of the Storm Water Treatment System.

Table 2 - List of Environmental Resources Within 1,000 Feet of the Storm Water Treatment System

Historic Sites

None

Recreational Areas

Chevron Park

Archaeological Sites

None

Designated Wildlife Management Areas

None

Swamps, Marshes and Wetlands

Jurisdictional Wetlands, Coastal Management Zone

Endangered Species and Other Critical Habitats

pallid sturgeon (Scaphirhynchus albus)

Wild and Scenic Rivers and Other Sensitive Ecological Areas None

ii. documentation from the appropriate state and federal agencies substantiating the historic sites, recreation areas, archaeologic sites, designated wildlife-management areas, wetlands, habitats for endangered species, and other sensitive ecologic areas within 1,000 feet of the facility; and

Appendix D contains a copy of the State Historic Preservation Office (SHPO), Louisiana Department of Culture, Recreation & Tourism, Office of Cultural Development letter dated February 3, 2006, stating that no archaeological sites or historical structures exist within 1,000 feet of the Storm Water Treatment System. The only recreational area nearby is Chevron Park, a recreation area owned by Chevron for use by employees and their families. Figure 5 identifies the location of the park, which is situated within the boundaries of the plant.

Appendix E contains a copy of the Louisiana Department of Wildlife and Fisheries (LDWF) letter dated February 1, 2006, which identifies the pallid sturgeon (Scaphirhynchus albus) as an endangered species. The pallid sturgeon has been identified in the Mississippi River. The Mississippi River is greater than 1,000 feet from the Storm Water Treatment System area. Additionally, LDWF requests that steps be taken to avoid the degradation of water quality in the Mississippi River. Because effluent from the Chevron facility is managed under LDEQ water discharge permits, no degradation of Mississippi River water quality is anticipated and no actions are required to address the LDWF comment.

LDWF has identified that no wildlife management areas are in the immediate vicinity and they are not aware of any nearby designated sensitive ecological areas.

Appendix F contains a copy of the U.S. Department of the Army, New Orleans District, Corps of Engineers letter dated May 24, 2006, which identified jurisdictional wetlands

under Section 404 of the Clean Water Act within 1,000 feet of the Storm Water Treatment System. No permit is necessary for the existing facility. Any expansion of the Storm Water Treatment System or Interconnecting Ditches that would impact the jurisdictional wetlands may require a permit from the USACE.

iii. a description of the measures planned to protect the areas listed from the adverse impact of operation at the facility.

Chevron Park is located within the boundaries of the Oak Point Plant. There is a perimeter fence around the park to prevent people from entering the plant or the landfill areas. The park is protected from runoff from the plant and the landfills by the railway tracks to the west, a ditch to the south, a ditch to the north, and a levee to the east.

The LDWF letter stated that steps should be taken to avoid the degradation of water quality in the Mississippi River. Chevron's Oak Point Plant closely monitors all discharges to the Mississippi River to ensure that all discharges are within the limits of the LPDES Permit; therefore, no additional action is required.

The jurisdictional wetland identified by the U.S. Department of the Army, New Orleans District, Corps of Engineers is within 1,000 feet of the Storm Water Treatment System. Because the unit is not on jurisdictional wetlands and the unit received waste prior to October 9, 2003, no action is required. Any expansion of the Storm Water Treatment System or Interconnecting Ditches that would impact the jurisdictional wetlands may require a permit from the USACE.

f. A wetlands demonstration, if applicable, as provided in LAC 33:VII.709.A.4.

As demonstrated on Figure 6, a map of National Wetlands Inventory Data from the U.S. Geological Service (USGS), and in the letter in Appendix F from the USACE, this section is not applicable because the Storm Water Treatment System is not located in wetlands. Also, this section does not apply to units that have not received waste prior to October 9, 1993. The Oak Point Plant Storm Water Treatment System has been receiving waste since 1985.

g. Demographic Information. The estimated population density within a 3-mile radius of the facility boundary, based on the latest census figures.

The 2000 Census reported a population of 5,414 residents within a 3-mile radius of the Storm Water Treatment System boundary. As shown on Figure 7, these residents are concentrated in areas north-northeast of the Storm Water Treatment System along Louisiana State Highway 23 at an approximate density of 2,500 persons per square mile.

2. The following information regarding wells, faults and utilities is required for Type I and II facilities:

a. Wells. Map showing the locations of all known or recorded shot holes and seismic lines, private water wells, oil and/or gas wells, operating or abandoned, within the facility and within 2,000 feet of the facility perimeter and the locations of all public water systems, industrial water wells, and irrigation wells within 1 mile of the facility. A plan shall be provided to prevent adverse effects on the environment from the wells and shot holes located on the facility.

Figure 8 is a map of oil and gas wells within a 2,000-foot radius of the facility perimeter. No water public supply, industrial, or irrigation wells were located within 1 mile of the facility perimeter. Other wells include monitor wells provided for the Oak Point Plant and the Storm Water Treatment System. These wells are owned by Chevron or its predecessor company, California Chemical Company. A plan to prevent adverse effects on the environment from the water wells on the site is provided in Appendix G.

- b. Faults
  - i. scaled map showing the locations of all recorded faults within the facility and within 1 mile of the perimeter of the facility; and

No faults have been mapped as existing throughout the facility. Deep-seated faults do not have displacements that would extend to the Storm Water Treatment System area.

ii. demonstration, if applicable, of alternative fault set-back distance as provided in LAC 33:VII.709.A.5.

The Storm Water Treatment system has received waste prior to October 9, 1993; hence, this section is not applicable. Furthermore, a review of geologic information for the site indicates that there are no known faults with movement in Holocene time expressed on the surface within 200 feet of the facility.

c. Utilities. Scale map showing the location of all pipelines, power lines, and right-of-ways within the site.

Scaled maps of the utilities present in the vicinity of the Storm Water Treatment System are provided as Figures 9 and 10.

- B. Facility Characteristics. Standards concerning facility characteristics are contained in LAC 33:VII.709.B (Type I and II facilities), LAC 33:VII.717.B (Type I-A and II-A facilities), and LAC 33:VII.719.B (Type III facilities). A facility plan, including drawings and a narrative, describing the information required below must be provided.
  - 1. The following information is required for all facilities:

 elements of the process or disposal system employed, including, as applicable, property lines, original contours (shown at not greater than 5-foot intervals), buildings, units of the facility, drainage, ditches and roads;

Figure 11 presents a plan view of the Oak Point Plant showing the property lines, buildings, facilities, excavations, drainage, and streets inside the plant.

The detailed map presented as Figure 12 shows the Storm Water Oil/Water Separator, the Storm Water Impoundment Basin, and the Interconnecting Ditches leading from the Separator to the Basin. A schematic of the wastewater treatment process is shown on Figure 13. The final contours of this facility will be undifferentiable from the natural land surface because it will be filled to the natural grade of the surrounding land.

b. the perimeter barrier and other control measures;

The perimeter of the Oak Point Plant is secured with a 6-foot high chainlink fence topped with three strands of barbed wire. Five gates provide direct access into the plant from Louisiana State Highway 23. The location of the perimeter fence and gate locations are depicted on Figure 11. During operating hours, access is controlled at the plant entry gates by security personnel. At night, unauthorized access is prevented by secure locking devices. Security cameras are located throughout the plant.

Signs are posted identifying the site as a solid waste surface impoundment and restricting access. Identification badges are required for all employees and contract personnel, and temporary identification badges are used for visitors.

c. a buffer zone;

The Oak Point Plant has existed at the present site since 1943. The plant has existing roadways, fences and levees that serve as the buffer zone. The property on which the basin is located is owned by Hero Land and has been under a lease agreement by Chevron since 1973. Chevron meets the 200-foot buffer zone requirement to the north. The east side is bounded by Highway 23. The Belle Chasse Naval Air Station borders the west side and a portion of the south side. The remaining section of the south side is owned by Hero Land. The Site Plan (Figure 11) details the layout of the basin area, roads, and fence lines but does not indicate the entire tract of land that Chevron has leased. Refer to Figure 11A (Chevron Drawing MF-75000-22) which indicates the plant property arrangement along with the leased area of the basin. Chevron request a waiver from the agency in accordance with LAC 33:VII.709.B.2.a regarding the buffer zone requirement since this is a previously permitted (1986) pre-existing facility. See Figure 5 for an aerial view of the basin and surrounding area.

d. fire-protection measures;

Emergency procedures, as in the event of a fire, are discussed in Appendix H.

The first response for a fire at this facility will be provided by Chevron personnel. Backup will come from the Belle Chasse Volunteer Fire Department as required.

e. landscaping and other beautification efforts;

This facility provides an aesthetically pleasing appearance. Existing trees and shrubs throughout the surrounding area will be maintained and additional ones will be planted as necessary to enhance the environment.

f. devices or methods to determine, record, and monitor incoming waste;

The Storm Water Treatment System, consisting of the Storm Water Impoundment Basin, the Storm Water Oil/Water Separator, and the Interconnecting Ditches between the Basin and the Separator, does not accept any waste from off-site sources. All wastes disposed at the plant are generated at the plant site.

g. LPDES discharge points (existing and proposed); and

The Oak Point Plant discharges the storm water into the Mississippi River under LPDES Permit No. LA0005738, issue date August 13, 2004, and Louisiana Multi-Sector General Permit LAR 05M735. The point discharge is Segment No. 0707 of the Mississippi River. This location is depicted on the Site Plan (Figure 2). A copy of the LPDES permit is presented in Appendix I.

The plant boundary is surrounded by a dike and levee system which provides run-on and runoff control for the entire plant. The system is designed to handle a 24-hour/25-year storm. Please refer to Figure 2.

h. other features, as appropriate.

Topographic maps of the site depicting all pertinent features are presented as Figures 1, 3, 4, 6, 7, and 8. In addition, this facility protects the environment, provides an aesthetically pleasing appearance, and protects the surrounding area as much as possible from any negative impact. Existing trees and shrubs throughout the surrounding area will be maintained and additional ones will be planted as necessary to enhance the environment.

- 2. The following information is required for Type I and II facilities:
  - a. areas for isolating nonputrescible waste or incinerator ash, and borrow areas; and

The Storm Water Treatment System does not receive incinerator ash, nor are there any borrow areas near the facility. The existing landfills (hazardous waste landfills A, B, and C) and impoundment basin (solid waste) are shown on the Site map (Figure 11). A discussion on the landfills is not included because of their hazardous waste classification. The landfills are in interim status. The post closure permit is currently being generated.

The Storm Water Impoundment Basin is approximately 600 feet long by 300 feet wide and 14 feet deep. The Basin capacity is estimated to be 16 million gallons, based on a maximum water level of 12 feet. A 2-foot freeboard is provided for overflow protection. Normally the Basin is operated at a 5-foot level which corresponds to a volume of 7 million gallons.

Water gravity flows from the plant's Storm Water Drainage System through the Storm Water Oil/Water Separator to the Basin. The flow rate varies depending on the weather and the clean-up activities in the plant.

b. location of leachate collection/treatment/removal system.

The Storm Water Treatment System does not have a leachate collection and treatment facility. The ground leachate is monitored by the monitor well system shown on Figure 14. Discussions on the groundwater monitor wells are presented in the responses to LAC 33:VII.521.F.5.a and 521.F.5.b (Facility Plans and Specifications).

- C. Facility Surface Hydrology. Standards governing facility surface hydrology are contained in LAC 33:VII.711.A (Type I and II landfills), LAC 33:VII.713.A (Type I and II surface impoundments), LAC 33:VII.715.A (Type I and II landfarms), LAC 33:VII.717.C. (Type I-A and II-A facilities), and LAC 33:VII.719.C (Type III facilities).
  - 1. The following information regarding surface hydrology is required for all facilities:
    - a. a description of the method to be used to prevent surface drainage through the operating areas of the facility;

The bank of the Storm Water Treatment System surface impoundment is sloped near the edge to collect storm water. Collected storm water is processed through the Storm Water Treatment System. Storm water that falls in the vicinity of the surface impoundment that is not collected is routed to the Parish drainage system under the storm water permit. The Oak Point Plant has a separate drainage system serving certain operating areas. This system is called the process water drainage system, and it is constructed of hard piping. The wastewater collected in this system is treated in the PACT unit prior to discharge to the Mississippi River.

b. a description of the facility runoff/run-on collection system;

The bank of the Storm Water Treatment System surface impoundment is sloped near the edge to direct storm water to the treatment system. Overland sheet flow is routed away from the surface impoundment and into the Parish drainage system. The Oak Point Plant discharges storm water into the Mississippi River under LPDES Permit, No. LA0005738, issue date August 13, 2004, and Louisiana Multi-Sector General Permit LAR 05M735. The point discharge is Segment No. 0707 of the Mississippi River. This location is depicted on Figures 2 and 14. A copy of the LPDES permit is provided in Appendix I.

A small section of the plant consisting of offices, parking lots, a recreational park, contractor maintenance area, and railroad spur drains into storm ditches which discharge into the Parish drainage system under the storm water permit.

c. the maximum rainfall from a 24-hour/25-year storm event;

Appendix J contains a rainfall map for the 24-hour/25-year return interval for the State of Louisiana, obtained from the Southern Regional Climate Center. The maximum rainfall is approximately 10.8 inches.

d. the location of aquifer recharge areas in the site or within 1,000 feet of the site perimeter, along with a description of the measures planned to protect those areas from the adverse impact of operations at the facility; and

The Storm Water Treatment System is not located in an aquifer recharge area. The description of the aquifer system located beneath the Chevron facility is discussed in Section 521.E.1 of this application. Summary data on the regional aquifers in the greater New Orleans area are presented in Appendix K.

e. if the facility is located in a flood plain, a plan to ensure that the facility does not restrict the flow of the 100-year base flood or significantly reduce the temporary water-storage capacity of the flood plain, and documentation indicating that the design of the facility is such that the flooding does not affect the integrity of the facility or result in the washout of solid waste.

As indicated on the FEMA Floodplain Map (Figure 3), the Oak Point Plant is not located within the 100-year floodplain area and is protected by the Army Corps of Engineers' levee system.

- D. Facility Geology. Standards governing facility geology are contained in LAC 33:VII.709.C (Type I and II facilities), LAC 33:VII.717.D (Type I-A and II-A facilities), and LAC 33:VII.719.D (Type III facilities).
  - 1. The following information regarding geology is required for Type I and Type II facilities:
    - a. isometric profile and cross-sections of soils, by type, thickness, and permeability;

#### Regional Geology

The Oak Point Plant is located within the Gulf Coast Basin, which is part of a large geosyncline or sediment filled basin. The sedimentary state within this basin dips southward toward the center of the basin with older geological units dipping at steeper angles than younger deposits. The sediments thicken in a basinward direction. Regionally, the strike of the strata is parallel to the present day Gulf of Mexico in an east-west direction. This trend is structurally modified by features such as growth faults and salt

domes. Cyclic sand-clay sequences of Pleistocene and Miocene age (0 to 20 million years old) dominate the subsurface geology below approximately 1,500 feet in Plaquemines Parish. The fluvial and marine deltaic deposits consist of interfingering lenticular beds of fine-grained sand and clay.

The near surface sediments of southern Louisiana consist of Recent alluvium and Pleistocene (0 to 2 million years old) terraces. The lowering of the mean global sea level during Recent and late Pleistocene times caused the Mississippi River to cut a deep wide valley in the older deltaic deposits thereby creating the Pleistocene terraces. After the seas had risen, the river filled the valley with alluvium.

#### Site Geology

The area surrounding the Oak Point Plant site is or has been low-lying marshland. The uppermost 200 feet underlying the plant consists of predominantly fine-grained sediments deposited by the Mississippi River as natural levees during periods of overbank flooding. Extensive leveeing and drainage has made this area suitable for construction especially for industrial concerns. The Oak Point Plant is located on a westward sloping levee of the Mississippi River, where the plant elevation ranges from 3 to 9 feet MSL.

Lithologic logs (Appendix L) were used to construct the geologic cross sections depicted on Figures 15 through 17. In general, the plant site is underlain by the following strata:

Strata	Approximate Range of Depth (ft bls)	
Upper Clay: clay and silty clay	0-11	
30-Foot Zone: sand and silt	11-36	
Lower Clay: clay and silty clay	36-90	
Lower Sand	90-Greater than 100	

ft bls feet below land surface

The upper stratum, which will be referred to as the upper clay, is composed of interfingered and lenticular deposits of silty and sandy clay containing numerous lenses of sand and silty sand. The Upper Clay Zone generally has low permeability and is underlain by older deltaic and marine deposits. An apparently continuous layer of silty sand was found at each boring site drilled deeper than the Upper Clay Zone. The depth of this deeper unit ranges from 11 to 36 ft bls and will be referred to as the 30-Foot Zone. The 30-Foot Zone is underlain by a clay stratum referred to as the Lower Clay.

b. logs of all known soil borings taken on the facility and a description of the methods used to seal abandoned soil borings;

Appendix L shows the lithologic logs of the soil borings that were drilled for monitor wells. Monitor Wells 13, 14R, 15, 16R, 17R, 18R, and MW-50 are installed around the subject permit facility. Monitor Wells 5, 6, 7, 8, and 10 were plugged and abandoned in 1984 (Appendix M). Chevron contracted Eustis Engineering Company to perform the service. The grout was composed of a mixture of a minimum of 8 parts cement to 1 part bentonite. A minimum amount of water was added to produce a semifluid grout which could be pumped through a Failing 36 drill rig. Once the grout was mixed, it was pumped through a drill rod which was placed down to the bottom of the well screen. The fluids in the well screens were displaced with grout from the bottom to the top of the ground service.

Additionally, Appendix L shows the lithologic logs for 13 borings and/or temporary piezometers advanced in the batture area of the facility in December 2000. The borings/temporary piezometers were installed by Prosonic Drilling Corporation, a water well contractor licensed by the State of Louisiana. The monitor wells installed in the batture area remain on site. The borings/temporary piezometers were plugged and abandoned in accordance with Louisiana Department of Environmental Quality (LDEQ) and Louisiana Department of Transportation and Development (LDOTD) guidelines. Appendix L also contains a copy of a recent geotechnical investigation conducted around the Basin.

On March 15, 2004, Chevron plugged and abandoned 24 monitor wells that were not required under any of Chevron's regulated sampling programs. The following monitor wells were plugged and abandoned: EDA/DETA-1, LMS-5R, LMS-6, LMS-8, LMS-9, LMS-11, LMS-12, MW-11, MW-20, MW-21, MW-26, MW-38R, MW-39R, MW-40, MW-41R, MW-52, MW-53, MW-54, MW-55, MW-56, OLOA-2, OLOA-3, OLOA-4, and TOLOA-5. The wells were plugged and abandoned in accordance with the procedures and specifications for abandoning groundwater monitor wells as presented in the December 2000 LDEQ and LDOTD handbook entitled *Construction of Geotechnical Boreholes and Groundwater Monitoring Systems*. In addition, Chevron installed two piezometers (PZ-1 and PZ-2) to aid in further understanding of groundwater movement. The Well Plugging and Abandonment Forms (DOTD-GW-2) for well removal and Water Well Registration Short Forms (DOTD-GW-1S) are included in Appendix M.

In the summer of 2005, Chevron discovered two monitor wells that were damaged. On August 15, 2005, Chevron had the two wells (Wells MW-01 and MW-02) removed from the facility. The wells were removed by Walker-Hill Environmental, Inc., a water well contractor licensed by the State of Louisiana. The plugging and abandonment forms are included in Appendix M.

c. results of tests for classifying soils (moisture contents, Atterberg limits, gradation, etc.), measuring soil strength, and determining the coefficients of permeability, and other applicable geotechnical tests;

Test results of the lithologic logs are presented in Appendix L.

d. geologic cross-section from available published information depicting the stratigraphy to a depth of at least 200 feet below the ground surface;

Figure 18 presents a summary of the geologic conditions at Belle Chasse based on published information ("Groundwater Data for the Mississippi River Parishes in the Greater New Orleans Area, Louisiana", U.S. Geological Survey (USGS) Water Resources, Basic Records No. 11, 1983).

e. for faults mapped as existing through the facility, verification of their presence by geophysical mapping or stratigraphic correlation of boring logs. If the plane of the fault is verified within the facility's boundaries, a discussion of measures that will be taken to mitigate adverse effects on the facility and the environment;

No faults have been mapped as existing throughout the facility. Deep-seated faults do not have displacements that would extend to the Storm Water Treatment System area. Refer to the response to Section 521.A.2.b.

f. for a facility located in a seismic impact zone, a report with calculations demonstrating that the facility will be designed and operated so that it can withstand the stresses caused by the maximum ground motion, as provided in LAC 33:VII.709.C.2; and

The Storm Water Treatment System is not located in a seismic impact zone.

g. for a facility located in an unstable area, a demonstration of facility design as provided in LAC 33:VII.709.C.3.

There are no geologic, geomorphologic, or on-site or local human-made features or events (either surface or subsurface) that would indicate that the Storm Water Treatment System area is unstable.

2. The following information regarding geology is required by Type III woodwaste, and construction/demolition-debris facilities:

The Storm Water Treatment System is a Type I facility, not a Type III. Hence, this section is not applicable.

- a. general description of the soils provided by a qualified professional (a
  geotechnical engineer, soil scientist, or geologist) along with a description of the
  method used to determine soil characteristics; and
- b. logs of all known soil borings taken on the facility and a description of the methods used to seal abandoned soil borings.
- E. Facility Subsurface Hydrology. Standards governing facility subsurface hydrology are contained in LAC 33:VII.715.A (Type I and II landfarms).

- 1. The following information on subsurface hydrology is required for all Type I facilities and Type II landfills and surface impoundments:
  - a. delineation of the following information for the water table and all permeable zones from the ground surface to a depth of at least 30 feet below the base of excavation:
    - i. areal extent beneath the facility;
    - ii. thickness and depth of the permeable zones and fluctuations;
    - iii. direction(s) and rate(s) of groundwater flow based on information obtained from piezometers and shown on potentiometric maps; and
    - iv. any change in groundwater flow direction anticipated to result from any facility activities;

An isopach map of the Upper Clay Zone, the 30-Foot Zone, and a Top of 30-Foot Structure Map are included as Figures 19 through 21, respectively. Potentiometric surface maps of the 30-Foot Zone are presented on Figures 22 through 25. An Upper Clay Zone potentiometric surface map is presented on Figure 26.

More than 30 years ago, two test wells were drilled to determine if a viable groundwater source was available beneath the facility. The first of the test wells was drilled to a depth of 800 feet. The boring indicated the presence of saline water at a depth of 300 feet.

The upper 200 feet beneath the facility consists of fine-grained sediments deposited by the Mississippi River. These uppermost strata generally exhibit low permeability. Underlying these materials are older deltaic and marine sediments. This lower sequence of deltaic and marine deposits contains four water-bearing zones that serve as aquifers for the New Orleans area. These four water-bearing zones are named the "200-Foot", "400-Foot", "700-Foot", and "1,200-Foot" aquifers.

Potentiometric surface maps for the "200-foot" Sand (Gramercy) Aquifer, the "400-Foot" Sand (Norco) Aquifer, and the "700-Foot" Sand (Gonzales-New Orleans) Aquifer are presented in Figures 27, 28, and 29, respectively. The maps for the "200-Foot" and "400-Foot" sands were developed from monitor well data obtained and reported in Groundwater Data for the Mississippi River Parishes in the Greater New Orleans Area, Louisiana, USGS Water Resources Basic Records Report No. 11, dated 1983. The water well readings used to develop these maps were recorded between 1957 and 1961. No more recent data are available from the USGS or similar agencies. The map for the "700-Foot" sand was copied from Louisiana Groundwater Map No. 2: Potentiometric Surface, 1987, of the Gonzales-New Orleans Aquifer in Southeastern Louisiana.

• The "700-Foot" sand aquifer is the major supplier of water for the New Orleans area; relatively little water is pumped from the "200-Foot" and "400-Foot" Sands.

• Only a few wells are screened in the "1,200-Foot" Sand, and very little data have been published for this zone.

#### **Groundwater Movement**

Two hydraulic units have been identified beneath the plant site, the Upper Clay and the 30-Foot Zone (see Figures 16 and 17). The movement and quality of groundwater in these two units are described below.

• The Upper Clay acts as a low permeability (hydraulic conductivity) unit that transmits groundwater horizontally across the site. Measured values of hydraulic conductivity for the Upper Clay were found to range from 10<sup>-5</sup> to 10<sup>-9</sup> centimeters per second (cm/sec). These data are listed in Appendix N. A series of monitor wells (see Figure 14) have been screened in the Upper Clay. Water-level elevations are measured in these wells. The groundwater flow is primarily from west to east beneath the site. Locally, anomalous flow patterns may be due to the influence exerted on the Upper Clay groundwater near the plant surface ditches and drains.

The following equation was used to calculate the groundwater velocity:

Water-level measurements were used to construct potentiometric maps of the 30-Foot Zone. Figures 22 through 25 show the water-level configurations or potentiometric surfaces for November 2003, May 2004, November 2004, and May 2005. The general direction of groundwater flow is from east to west (away from the Mississippi River); however, flow near the impoundment has been observed to move toward this unit probably in response to low fluid levels in the impoundment. No other changes in flow direction are anticipated.

In the 30-Foot Zone groundwater, flow rate has been calculated based on the hydraulic gradients obtained from water-level measurements. The average rate of flow for this zone is approximately 30 feet per year (ft/yr).

#### For the 30-Foot Zone:

```
K (Horizontal) = 1.28 \times 10^3 ft/yr

i = 0.007 ft/ft

n = 30 percent

v (Horizontal) = 29.9 ft/yr
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The 30-Foot Zone, which is composed of sand and silt, is more permeable than the Upper Clay and, therefore, displays hydraulic conductivities in the 10<sup>-3</sup> to 10<sup>-4</sup> cm/sec range (Appendix N).

- b. delineation of the following, from all available information, for all recognized aquifers which have their upper surfaces within 200 feet of the ground surface:
  - i. areal extent;
  - ii. thickness and depth to the upper surface;
  - iii. any interconnection of aquifers; and
  - iv. direction(s) and rate(s) of groundwater flow shown on potentiometric maps.

The water bearing sediments of the Upper Clay Zone are discontinuous across the facility. Inspection of the boring logs and cross sections around the Storm Water Treatment System reveals that water bearing sediments of the Upper Clay are not present. The 30-Foot Zone has historically been recognized as the uppermost water bearing zone beneath the Strom Water Treatment System.

In the vicinity of the Oak Point Plant, several freshwater aquifers are present. The four major sand zones that serve as aquifers for the New Orleans area are present at depths below 200 ft bls. The quality of water in these aquifers south of New Orleans is generally poor, as indicated by wells that yield brackish or salty water. A summary of geohydrologic characteristics of the aquifers found in the New Orleans area were identified and described by Rollo, J.R., Groundwater Resources of the Greater New Orleans Area, Louisiana, Louisiana Department of Conservation and Louisiana Department of Public Works Resources Bulletin No. 9, p. 69, 1966, as summarized below:

- 200-Foot Sand (Gramercy) Aquifer The 200-Foot Sand aquifer is comprised of a series of sand lenses and channel fills that are not laterally continuous. The 200-Foot Sand is believed to contain nonpotable brackish or salty water within the vicinity of the Oak Point Plant site;
- 400-Foot Sand (Norco) Aquifer The 400-Foot Sand aquifer pinches out approximately 2 miles west of the facility;
- 700-Foot Sand (Gonzales New Orleans) Aquifer The 700-Foot Sand aquifer is the major aquifer system utilized in the greater New Orleans area for over 100 years. This unit ranges in thickness from 150 to 250 feet and is approximately 175 feet thick in the vicinity of the Oak Point Plant. Most of the pumpage is located approximately 10 miles north of the plant site; and

• 1,200-Foot Sand - The 1,200-Foot Sand aquifer is comprised of fine- to mediumgrained sand and has a high total dissolved solids content. The water is classified as slightly saline to brine.

Pumping from the Gramercy, Norco, and 1,200-Foot Sand aquifers is minimal. Groundwater movement in all of the aquifers is part of the regional flow system typical to the New Orleans area. Prepumping directions of groundwater flow are largely controlled by geologic structures. Groundwater has historically moved southerly to southwesterly from the outcrop areas to areas of discharge. Water in the aquifers discharged into the Mississippi River alluvial aquifer, which generally had a lower head. During short periods of time, however, the river stage was temporarily reversed. At present, the flow system along the alluvial valley remains essentially the same as it was under prepumping conditions. (Reference: Geohydrology and Simulated Effects of Pumpage on the New Orleans Aquifer System at New Orleans, Louisiana, United States Department of the Interior Geological Survey, Water Resources Technical Report No. 46, 1989.)

- 2. The following information on subsurface hydrology is required for Type II landfarms. Delineation of the following information for the water table and all permeable zones from the ground surface to a depth of at least 30 feet below the zone of incorporation:
  - a. areal extent beneath the facility;
  - b. thickness and depth of the permeable zones and fluctuations;
  - c. direction(s) and rate (s) of groundwater flow based on information obtained from piezometers and shown on potentiometric maps); and
  - d. any change in groundwater flow direction anticipated to result from any facilities activities.

The Storm Water Treatment System is a Type I surface impoundment, not a Type II landfarm. Consequently, this section is not applicable.

- F. Facility Plans and Specifications. Standards governing facility plans and specifications are contained in LAC 33:VII.711.B (Type I and II landfills), LAC 33:VII.713.B (Type I and II surface impoundments), LAC 33:VII.715.B (Type I and II landfarms), LAC 33:717.E (Type I-A and II-A facilities), LAC 33:VII.721.A (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.A (Type III composting facilities), and LAC 33:VII.725.A (Type III separation facilities). Standards for groundwater monitoring are contained in LAC 33:VII.709.E (Type I and II facilities).
  - 1. Certification. The person who prepared the permit application must provide the following certification:

"I certify under penalty of law that I have personally examined and I am familiar with the information submitted in this permit application and that the facility as described in this permit application meets the requirements of the solid waste rules and regulations. I am aware that there are significant penalties for knowingly submitting false information, including the possibility of fine and imprisonment."

#### Certification of this solid waste permit application is presented in Appendix O.

- The following information on plans and specifications is required for Type I and II facilities:
  - a. detailed plan-view drawing(s) showing original contours, proposed elevations of the base of units prior to installation of the liner system, and boring locations;
  - b. detailed drawings of slopes, levees, and other pertinent features; and
  - c. the type of material and its source for levee construction. Calculations shall be submitted demonstrating that an adequate volume of material is available for the required levee construction.

The Oak Point Plant has one surface impoundment for storm water called the Storm Water Impoundment Basin. The cross-sectional drawings showing the grades of the Basin are shown on Figures 15 through 17. The final grades of the Basin will be the same as the natural grade of the surrounding land.

The Storm Water Impoundment Basin does not have a special drainage system. There are no levees that surround the Storm Water Impoundment Basin. After most of the oil is separated from the water at the Storm Water Oil/Water Separator, the water flows to the Basin following the ditches. The water in the Basin is pumped to the Flotation unit for further treatment prior to river discharge.

The soil types of the Storm Water Impoundment Basin are determined from the lithologic logs of Monitor Wells MW-15, MW-16, MW-17R, and MW-18R located around the Basin. Appendix L includes lithologic logs of these wells and other wells in the plant.

- 3. The following information on plans and specifications is required for Type I, II, and III landfills:
  - a. approximate dimensions of daily fill and cover; and
  - b. the type of cover material and its source for daily, interim, and final cover. Calculations shall be submitted demonstrating that an adequate volume of material is available for daily, interim, and final cover.

The Storm Water Treatment System consists of a Storm Water Impoundment Basin, a Storm Water Oil/Water Separator, and Interconnecting Ditches; it does not contain a landfill. Hence, this section is not applicable.

- 4. The following information on plans and specifications for the prevention of groundwater contamination must be submitted for Type I and II facilities:
  - a. representative cross-sections and geologic cross-sections showing original and final grades, approximate dimensions of daily fill and cover, drainage, the water table, groundwater conditions, the location and type of liner, and other pertinent information;
  - a description of the liner system, which shall include: calculations of anticipated leachate volumes, rationale for particular designs of such systems, and drawings;
     and

As discussed in Section 521.D, the Upper Clay Zone is potentially influenced by the presence of an open-channel drainage system which serves the main plant and flows westerly underneath Louisiana State Highway 23. This zone is not present around the Storm Water Impoundment Basin. The drainage system penetrates the water table and apparently receives groundwater flow. Also, the vertical flow potential is strongly upward from the 30-Foot Zone to the Upper Clay Zone. This site-specific hydrogeological characteristic provides groundwater protection. All water discharge from the facility would meet LPDES Permit LA0005738. Representative cross sections are provided on Figures 15 through 17. No leachate collection or leak detection system of liners is required for the system because it is an existing unit.

 a description of the leachate collection and removal system, which shall include calculations of anticipated leachate volumes, rationale for particular designs of such systems, and drawings.

The Oak Point Plant Storm Water Treatment System does not have a leachate collection and removal system because it is an existing unit. Discussions on the groundwater monitor wells are presented in Sections 521.F.5.a and 521.F.5.b (Facility Plans and Specifications).

- 5. The following information on plans and specifications for groundwater monitoring must be provided for Type I and II facilities:
  - a. a minimum of three piezometers or monitoring wells in the same zone must be provided in order to determine groundwater flow direction;

The groundwater monitoring network consists of a minimum of one upgradient well and a minimum of two downgradient wells, as depicted on Figure 12, for each integral part of this unit as per LAC 33:VII.709.E of the Louisiana Solid Waste Regulations, as discussed below:

- Storm Water Oil/Water Separator the upgradient well, MW-14R, and the downgradient wells, MW-13 and MW-50, comprise monitoring for the separator. These wells are completed in the 30-Foot Zone. This is considered the uppermost aquifer and has been identified as a continuous layer of silty sand underlying the facility at a depth of approximately 30 feet;
- <u>Interconnecting Ditches</u> the upgradient well, MW-14R, and the downgradient wells, MW-13 and MW-50, also comprise the monitoring for the ditches. These wells are completed in the 30-Foot Zone; and
- Storm Water Impoundment Basin the upgradient well, MW-15, and the downgradient wells, MW-16R, MW-17R, and MW-18R comprise monitoring for the Basin. These wells are also completed in the 30-Foot Zone.
  - b. for groundwater monitoring wells, cross-sections illustrating construction of wells, a scaled map indicating well locations and the relevant point of compliance, and pertinent data on each well, presented in tabular form, including drilled depth, the depth to which the well is cased, screen interval, slot size, elevations of the top and bottom of the screen, casing size, type of grout, ground surface elevation, etc.;

The location of the monitor wells and well cross section are depicted on Figures 12, 14, 15, 16, and 17. Generalized well construction details are presented on Figure 30. The monitor well system was upgraded in 1993. The points of compliance are depicted on Figure 31.

Construction details of Monitor Wells MW-14R, MW-13, MW-50, MW-15, MW-16, MW-17R, and MW-18R are as follows:

Well	Top of Casing Elevation/Land Surface Elevation (ft msl)	Total Depth of Boring (ft bls)	Screen Interval (ft bls)	PVC Well Diameter (inches)
MW-14R	8.93/6.93	36.0	29-34	2
MW-13	7.78/5.78	34.5	26-31	2
MW-50	5.91/3.91	37.0	29-34	2
MW-15	11.73/9,73	49.5	13-18	2
MW-16R	10.47/8.47	49.5	20-25	2
MW-17R	10.91/8.91	35.5	27-32	2
MW-18R	10.47/8.47	49.5	23-33	2

 a groundwater monitoring program including a sampling and analysis plan that includes consistent sampling and analysis procedures that ensure that monitoring results provide reliable indications of groundwater quality;

The Groundwater Sampling Plan for the Storm Water Treatment System is presented in Appendix P.

d. for an existing facility, all data on samples taken from monitoring wells in place at the time of the permit application must be included. (If this data exists in the department records, the administrative authority may allow references to the data in the permit application.) For an existing facility with no wells, groundwater data shall be submitted within 90 days after the installation of monitoring wells. For a new facility, groundwater data (one sampling event) shall be submitted before waste is accepted;

Groundwater quality data for the Storm Water Treatment System have been collected and submitted to LDEQ since September 1985. These data are herein incorporated by reference.

e. a plan for detecting, reporting, and verifying changes in groundwater; and

The Groundwater Sampling Plan for the Storm Water Treatment System is presented in Appendix P.

f. the method for plugging and abandonment of groundwater monitoring systems.

Prior to abandonment of any monitor wells, written notification will be submitted to LDEQ and following written Department approval, monitor wells will be abandoned according to the requirements listed in the most current version of the LDEQ and LDOTD handbook entitled Construction of Geotechnical Boreholes and Groundwater Monitoring Systems.

6. The facility plans and specifications for Type I and II landfills and surface impoundments (surface impoundments with on-site closure and a potential to produce gases) must provide a gas collection and treatment or removal system.

The Storm Water Treatment System is an existing unit with plans for clean closure. Hence, this regulation is not applicable.

G. Facility Administrative Procedures. Standards governing facility administrative procedures are contained in LAC 33:VII.711.C (Type I and II landfills), LAC 33:VII.713.C (Type I and II surface impoundments), LAC 33:VII.715.C (Type I and II landfarms), LAC 33:VII.717.F (Type I-A and II-A facilities), LAC 33:VII.721.B (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.B (Type III composting facilities), and LAC 33:VII.725.B (Type III separation facilities).

- 1. The following information on administrative procedures is required for all facilities:
  - a. recordkeeping system; types of records to be kept; and the use of records by management to control operations;

The records maintained on site by the Oak Point Plant include, but are not limited to:

- copies of the current Louisiana solid waste rules and regulations;
- the permit;
- the permit application;
- permit modifications;
- certified field notes for construction;
- operator training programs;
- daily log;
- quality-assurance/quality-control records;
- inspections by the permit holder or operator;
- Board of Certification and Training for Solid Waste Disposal System Operator Certificates (if applicable);
- records demonstrating that liners and leak-detection and cover systems are constructed or installed in accordance with appropriate assurance procedures;
- monitoring, testing, or analytical data;
- any other applicable or required data deemed necessary by the administrative authority;
- records on groundwater sampling results;
- post-closure monitoring reports; and
- copies of all documents received from or submitted to the department.

The Oak Point Plant will submit annual reports to LDEQ to meet the report requirements. See detailed response under 713.C.1a.

The Oak Point Plant operators fill out status reports during each 12-hour shift to report on what happened during the shift. Appendix Q contains a completed Turnover Report for the Ecology area. The Ecology area includes the Storm Water Treatment System and the Process Water Treatment System. The Turnover Report gives information that is related to the subject permit facility such as:

- The Storm Water Impoundment Basin status (reported under Basin); and
- The results of the water tests (reported under Stream 202).

In addition, an Ecology Turnover Report is filled out daily to report the results of the incoming water to the Storm Water Oil/Water Separator, the status of the oil skimmer in the Basin, and other information about the discharge streams.

A visual inspection of the Ecology area including the Storm Water Oil/Water Separator, the Interconnecting Ditches, the Impoundment Basin, and other pieces of equipment is conducted by the operator once every 12 hours. Any problems or malfunctions noticed during this inspection are recorded in the comments section of the Turnover Report. The operator also checks the outstanding items which were recorded in the previous shift. The information on the Turnover Reports is reviewed daily by management and engineering to ensure that the Turnover Reports are properly filled out and to monitor the operations in the Ecology area. After the review, the Turnover Reports are used by the environmental technician to prepare the LPDES (Permit No. LA0005738) Discharge Monitoring Report (DMR). DMRs are submitted to LDEQ as scheduled in the LPDES permit. These records will be maintained for the life of the facility and will be kept on file for a minimum of 3 years after closure.

b. an estimate of the minimum personnel, listed by general job classification, required to operate the facility; and

The personnel chart of the Oak Point Plant Operations Department is shown in Appendix R. The personnel chart lists the following positions: Operations Manager (1), Section Supervisor (1), Relief Shift Supervisor (1), Operations Assistant – B&S (1), Operations Technician (1), and four crews. Each crew consists of a Shift Supervisor, Head Operator, and an Operator.

 maximum days of operation per week and per facility operating day (maximum hours of operation within a 24-hour period).

The Oak Point Plant, including the Storm Water Oil/Water Separator, the Storm Water Impoundment Basin, and the Interconnecting Ditches, operates 24 hours a day, 7 days a week, 52 weeks a year.

2. Administrative procedures for Type II facilities shall include the number of facility operators certified by the Louisiana Solid Waste Operator Certification and Training Program (R.S. 37:3151 et seq.).

The Storm Water Treatment System located at Chevron's Oak Point Plant in Belle Chasse, Louisiana, is a Type I facility, not a Type II. Consequently, Section 521.G.2 is not applicable.

- H. Facility Operational Plans. Standards governing facility operational plans are contained in LAC 33:VII.711.D (Type I and II landfills), LAC 33:VII.713.D (Type I and II surface impoundments), LAC 33:VII.715.D (Type I and II landfarms), LAC 33:VII.717.G (Type I-A and II-A facilities), LAC 33:VII.721.C (Type III construction and demolition debris and woodwaste landfills), LAC 33:VII.723.C (Type III composting facilities), and LAC 33:VII.725.C (Type III separation facilities).
  - 1. The following information on operational plans is required for all facilities:
    - a. types of waste (including chemical, physical, and biological characteristics of industrial wastes generated on-site), maximum quantities of wastes per year, and sources of waste to be processed or disposed of at the facility;

The Storm Water Treatment System receives storm water runoff generated during rain events. The influent to the facility primarily contains surface free oil, bottoms sludge, and storm water runoff. Other solids which collect in the Storm Water Treatment System consist of soil (dirt) which washes into the system from plant roadways and surrounding undeveloped, nonconcreted, or nonpaved areas.

The main source of the input to the system is rainfall. Additionally, leaks and spills from the transfer or bulk storage systems, solids associated with storage tanks or silos, and surface dirt transferred to the system through sheet flow are sources of waste collected and transferred to the Storm Water Treatment System.

The existing Storm Water Oil/Water Separator, the Storm Water Impoundment Basin, and the Interconnecting Ditches leading from the Separator to the Basin are interconnected parts of the same Storm Water Treatment System. The facilities and their functions are as follows:

### Storm Water Oil/Water Separator Forebay

The Storm Water Oil/Water Separator Forebay is the first treatment facility for the plant's storm water runoff. The forebay serves three purposes. It is the initial collection basin for the storm water sewers and as such it serves to break the velocity head of the incoming plant runoff. It also serves as a flow distributor so that an evenly distributed and steady flow is provided for the main separator cells. A third function of the forebay is the removal of surface free oil and bottoms sludge. Most of the free oil occurring in the plant storm water runoff is removed in the forebay.

The forebay is approximately 11 feet deep and occupies approximately 1,000 square feet (including the channel to the main separator cells). The entire separator (including the forebay) is built below grade. However, only the forebay and the inlet channel to the main separator cells are being permitted as solid waste facilities. These parts of the separator have a natural clay bottom while the rest of the unit is lined with concrete.

### **Interconnecting Ditch**

The Interconnecting Ditches transport storm water from the Oil/Water Separator to the Storm Water Impoundment Basin. It is permitted as a solid waste facility because it is part of the Storm Water Treatment System. The unit serves three purposes: it conveys storm water; it provides surge capacity for the impoundment; and it removes light non-aqueous phase liquids using oil collection systems.

The Interconnecting Ditches are approximately 1,500 feet long and have an average cross-sectional area of approximately 125 square feet.

#### Storm Water Impoundment Basin

The plant Storm Water Impoundment Basin is a large aerated pond. The purpose of the Basin is to provide flow equalization in the Storm Water LPDES System. A secondary function of the Basin is to provide biotreatment. The pond is partially aerated with surface aerators.

The Basin occupies approximately 180,000 square feet of area, has a maximum operational level of 12 feet (16 million gallons), and a total depth of 14 feet. The total depth of the Basin is 14 feet. The area around the Basin contains four wells for groundwater monitoring as shown on Figure 12. The inlet to the pond is the Interconnecting Ditches and the pond effluent is pumped to the plant's flotation device. Additional information is presented in Section 713.D.3.e.ii.

The facility produces liquid products using primarily liquid raw materials. There are some solids handled at the facility which could potentially be washed into the Storm Water Treatment System from leaks or spills from the transfer or bulk storage systems. The bulk solids with associated storage tanks or silos include diatomaceous earth, lime, trona, sodium bicarbonate, and sulfur (which is molten but becomes solid when spilled). The transfer and storage systems are designed to minimize material loss. The diatomaceous earth is used as a filter media for most products. This produces a filter cake which is disposed of off site. Storm water runoff from the landfills is drained into the Parish Ditch System.

Other solids which collect in the Storm Water Treatment System consist of soil (dirt) which washes into the system from plant roadways and surrounding undeveloped, nonconcreted, or nonpaved areas.

A sample of the liquid influent to the Storm Water Treatment System was analyzed by the toxicity characteristic leaching procedure (TCLP). The TCLP indicated that the influent does not exhibit hazardous waste characteristics. A copy of the results of the TCLP analyses of the solids from the Storm Water Impoundment Basin and Interconnecting Ditches can be found in Appendix S.

The yearly volume of waste to be handled in the Storm Water Treatment System is estimated at 140 wet weight tons per year.

b. waste-handling procedures from entry to final disposition, which could include shipment of recovered materials to a user;

The storm water collection system used at the Oak Point Plant consists of a complex, facility-wide network of drains and pipelines. The Storm Water Treatment System treats potentially contaminated storm water runoff.

Storm water is collected in the drains and pipelines located within and surrounding each process unit and is routed to the facility's Storm Water Oil/Water Separator. The Oil/Water Separator allows free oil in the water to rise to the surface where it is subsequently removed by skimming. The recovered oil is recycled in an environmentally acceptable manner. Treated wastewater from the Separator flows into a storm water drainage ditch (i.e., front ditch). The front ditch transports the treated storm water to another ditch known as the Interconnecting Ditch. The Interconnecting Ditch connects the front ditch with the Storm Water Impoundment Basin, thus allowing the wastewater to flow into the Basin. The front ditch and the Interconnecting Ditch each contain an oil removal system which is used to remove any remaining surface oil from the wastewater.

The Storm Water Impoundment Basin is a large, aerated pond occupying approximately 180,000 square feet (600 feet long by 300 feet wide), has a maximum operational level of 12 feet (16 million gallons), and a total depth of 14 feet. The primary purposes of the basin are to provide surge capacity and flow equalization in the storm water LPDES. Wastewater is pumped to the flotation device prior to discharge through LPDES Outfall 202 into the Mississippi River.

Sediments collected from the Oil/Water Separator, Interconnecting Ditch, and Storm Water Impoundment Basin were tested for various metals by U.S. Environmental Protection Agency (USEPA) SW-846 Method 6010, volatile organic compounds by USEPA SW-846 Method 8260, semivolatile organic compounds by USEPA SW-846 Method 8270, Methanol by USEPA SW-846 Method 8015M, Ammonia by USEPA Method 350.2, flashpoint, reactive cyanide, reactive sulfide, and pH by SW 9045. The laboratory analytical results are presented in Appendix S. Solids are periodically dredged from the Interconnecting Ditches and disposed of off site.

c. minimum equipment to be furnished at the facility;

A schematic showing the minimum equipment to be furnished at the facility is supplied on Figure 11. The schematic indicates that oil/water separators, activated sludge biological treatment, aeration basins, polishing filters, etc., are required for operation of the facility.

d. plan to segregate wastes, if applicable;

Not applicable. The wastes handled in the Storm Water Treatment System are compatible.

 e. procedures planned in case of breakdowns, inclement weather, and other abnormal conditions (including detailed plans for wet-weather access and operations);

In case of equipment breakdown, the water continues to be discharged per LPDES limits, if possible. Otherwise the water is held in the Basin longer (up to 13 days), until repairs are complete.

f. procedures, equipment, and contingency plans for protecting employees and the general public from accidents, fires, explosions, etc., and provisions for emergency care should an accident occur (including proximity to a hospital, fire and emergency services, and training programs); and

In the event that an emergency arises, such as described above, the person discovering the incident shall immediately take measures to contain or control the situation. If the person cannot control the situation, they shall immediately notify their supervisor who will follow procedures as described in the plant emergency response procedures.

Chevron's on-site fire department has the ability to meet the response requirements of Section 472 of the Life Safety Code of the National Fire Protection Association in accordance with Louisiana R.S. 30:2157. Furthermore, Chevron has contacted hospital and EMS facilities regarding their capability to respond to Chevron in the event of an emergency. Copies of the contact letters are provided in Appendix H. The plant emergency response procedures are found in the Emergency Response Manual presented in Appendix H. In addition, the Formal Operator Training Program is presented as Appendix T.

g. provisions for controlling vectors, dust, litter, and odors.

Not applicable. The Oak Point Plant does not have vector, dust, litter or odor problems associated with the Storm Water Treatment System due to the type of waste handled.

- 2. The following information on operational plans is required for Type I and II facilities:
  - a comprehensive operational plan describing the total operation, including (but not limited to) inspection of incoming waste to ensure that only permitted wastes

are accepted (Type II landfills must provide a plan for random inspection of incoming waste loads to ensure that hazardous wastes or regulated PCB wastes are not disposed of in the facility.); traffic control; support facilities; equipment operation; personnel involvement; and day-to-day activities. A quality-assurance/quality-control [QA/QC] plan shall be provided for facilities receiving industrial waste; domestic-sewage sludge; incinerator ash; friable asbestos; nonhazardous petroleum-contaminated media; and debris generated from underground storage tanks [UST], corrective action, or other special wastes as determined by the administrative authority. The QA/QC plan shall include (but shall not be limited to) the necessary methodologies; analytical personnel; preacceptance and delivery restrictions; and appropriate responsibilities of the generator, transporter, processor, and disposer. The QA/QC plan shall ensure that only permitted, nonhazardous wastes are accepted;

An Operation and Maintenance Plan for the Storm Water Treatment System is provided in Appendix U. The Operation and Maintenance Plan for the Storm Water Treatment System describes the requirements for proper operation and maintenance of the storm water system. This manual describes daily system checks, sampling requirements (streams, parameters, frequencies, etc.), preparation of wastes for disposal, and emergency procedures for the Ecology area, which includes the Storm Water Treatment System.

b. salvaging procedures and control, if applicable; and

Not applicable. The Storm Water Treatment System does not salvage any material from the water and there are no materials in the System that have intrinsic value that would make them targets for salvaging.

c. scavenging control.

Not applicable. The Storm Water Treatment System does not scavenge any material from the water and there are no materials in the System that have intrinsic value that would make them targets for scavenging.

- 3. The following information on operational plans is required for Type I and II landfarms:
  - a. items to be submitted regardless of land use:
    - i. a detailed analysis of waste, including (but not limited to) pH, phosphorus, nitrogen, potassium, sodium, calcium, magnesium, sodium-adsorption ratio, and total metals (as listed in LAC 33:VII.715.D.3.b);
    - ii. soil classification, cation-exchange capacity, organic matter, content in soil, soil pH, nitrogen, phosphorus, metals (as listed in LAC

- 33:VII.715.D.3.b), salts, sodium, calcium, magnesium, sodium-adsorption ratio, and PCB concentrations of the treatment zone;
- iii. annual application rate (dry tons per acre) and weekly hydraulic loading (inches per acre); and
- iv. an evaluation of the potential for nitrogen to enter the groundwater;
- b. items to be submitted in order for landfarms to be used for food-chain cropland:
  - a description of the pathogen-reduction method for septage, domestic sewage sludges, and other sludges subject to pathogen production;
  - ii. crops to be grown and the dates for planting;
  - iii. PCB concentrations in waste;
  - iv. annual application rates of cadmium and PCBs; and
  - v. cumulative applications of cadmium and PCBs;
- c. items to be submitted for landfarms to be used for nonfood-chain purposes:
  - description of the pathogen-reduction method in septage, domestic sewage sludges, and other sludges subject to pathogen production; and
  - ii. description of control of public and livestock access.

The Storm Water Treatment System consists of a Storm Water Impoundment Basin, a Storm Water Oil/Water Separator, and Interconnecting Ditches; it is not a landfarm. Consequently, this section is not applicable.

- 4. The following information on operational plans is required for Type I-A and II-A incinerator waste-handling facilities and refuse-derived energy facilities:
  - a description of the method used to handle process waters and other water discharges which are subject to LPDES permit and state water discharge permit requirements and regulations; and
  - b. a plan for the disposal and periodic testing of ash (all ash and residue must be disposed of in a permitted facility).

The Storm Water Treatment System is a Type I disposal facility, not a Type I-A or II-A incinerator waste-handling facility or a refuse-derived energy facility. Hence, this section is not applicable.

- 5. The following information on operational plans is required for Type I-A and II-A refuse-derived fuel facilities and Type III separation and composting facilities:
  - a. a description of the testing to be performed on the fuel or compost; and
  - b. a description of the uses for and the types of fuel/compost to be produced.

The Storm Water Treatment System is a Type I disposal facility, not a Type I-A or II-A refuse-derived fuel facility or Type III separation and composting facility. Hence, this section is not applicable.

The operational plans for Type I-A and II-A refuse-derived fuel facilities and Type
III separation and composting facilities must include a description of marketing
procedures and control.

The Storm Water Treatment System is a Type I disposal facility, not a Type I-A or II-A refuse-derived fuel facility or Type III separation and composting facility. Hence, this section is not applicable.

7. The operational plans for Type I and II facilities receiving waste with a potential to produce gases must include a comprehensive air monitoring plan.

An Operation and Maintenance Plan for the Storm Water Treatment System is provided in Appendix U. The Storm Water Treatment System is an operational Type I facility. It does not have the potential to produce gases; therefore, the Operation and Maintenance Plan for the Storm Water Treatment System does not contain a comprehensive air monitoring plan.

- I. Implementation Plan. Standards governing implementation plans are contained in LAC 33:VII.709.D (Type I and II facilities), LAC 33:VII.717.H (Type I-A and II-A facilities), and LAC 33:VII.719.E (Type III facilities).
  - 1. The implementation plans for all facilities must include the following:
    - a. a construction schedule for existing facilities which shall include beginning and ending time-frames and time-frames for the installation of all major features such as monitoring wells and liners. (Time-frames must be specified in days, with day one being the date of standard permit issuance); and
    - b. details on phased implementation if any proposed facility is to be constructed in phases.

The Storm Water Treatment System is an existing facility with no current plans for expansion or modification. Consequently, Section 521.I is not applicable.

2. The implementation plans for Type I and II facilities must include a plan for closing and upgrading existing operating areas if the application is for expansion of a facility or construction of a replacement facility.

The Storm Water Treatment System is an existing facility with no construction planned; hence, this section is not applicable.

- J. Facility Closure. Standards governing facility closure are contained in LAC 33:VII.711.E (Type I and II landfills), LAC 33:VII.713.E (Type I and II surface impoundments), LAC 33:VII.715.E (Type I and II landfarms), LAC 33:VII.717.I (Type I-A and II-A facilities), LAC 33:VII.721.D (construction and demolition debris and woodwaste landfills), LAC 33:VII.723.D (Type III composting facilities), and LAC 33:VII.725.D (Type III separation facilities).
  - 1. The closure plan for all facilities must include the following:
    - a. the date of final closure;

The three individual units of the Storm Water Treatment System will continue in their operation until the Oak Point Plant is closed because their function in the treatment of plant storm water runoff is essential to the operation of the plant. Chevron has no plans to close the Oak Point Plant in the foreseeable future. The plant has been operating in its present location for more than 51 years and will continue in operation as long as the business can be operated profitably or as a necessary and integral part of Chevron Corporation.

For this reason, the exact date of closure cannot be specified at this time. However, LDEQ will be notified in writing of Chevron's intent to close the solid waste facility not less than 90 days prior to implementation of the closure.

LDEQ will be notified of the planned date of closure, requested changes (if any) in the approved closure plan, the closure schedule, the estimated cost, and certification that the closure is to be performed in accordance with this closure plan.

b. the method to be used and steps necessary for closing the facility; and

Chevron will close the Oak Point Plant in Belle Chasse, Louisiana, in accordance with the Louisiana Solid Waste Regulations. The closure (and post-closure care, if needed) of the plant's solid waste facility will be performed according to the procedures described below.

Detailed closure plan will be submitted for approval at the same time with the submittal of notification for intent to close.

Sampling and analysis plan will be included in the detailed closure plan to properly confirm that the entire treatment system is clean prior to back filling.

Three of the treatment facilities are being permitted as solid waste sites. They are the forebay to the Storm Water Oil/Water Separator, the Interconnecting Ditches, and the Storm Water Impoundment Basin. As solid waste facilities, the closure of the units will be done in accordance with the Louisiana Solid Waste Regulations.

All of the solid waste facilities will be clean closed. The impounded storm water will be removed and the sidewalks and bottoms of the facilities will be dredged. The dredged material will be disposed of off site. The solid waste facilities will then be filled in with soil and a final grass cover will be provided.

The first step in closing the Storm Water Treatment System will be to stop the inlet of water into the units and allow the impounded storm water in the Oil/Water Separator, Interconnecting Ditches, and Storm Water Impoundment Basin to be worked off in the Storm Water Management System. This will be done by closing the storm water drainage sewers (the inlet to the forebay of the Oil/Water Separator). This will allow the water to drain out of the Separator forebay and cells. Most of the water can be removed by gravity draining into the Storm Water Impoundment Basin; the remainder will need to be pumped out. The water will be worked off in the downstream facilities and will ultimately be discharged to the Mississippi River under the Plant's LPDES Permit.

Once the water has been drained from the Separator, the sidewalls and bottom of the forebay and the inlet channel will be dredged. The dredged material will be disposed of off site.

The dredged material will be characterized using the USEPA's TCLP for appropriate toxicity characteristic parameters related to the Oak Point Plant: corrosivity (pH), reactivity (sulfide and cyanide), and ignitability. These tests are needed to ensure that the dredged material is nonhazardous and suitable for disposal off site. Additionally, sidewall and bottom sediment samples will be collected and tested for groundwater parameters appropriate for soil (i.e., benzene, toluene, xylene, ethylbenzene, volatile petroleum hydrocarbons [VPH], extractable petroleum hydrocarbons [EPH], phenol, and zinc) to ensure clean closure. Samples will be collected within 2,500-square-foot grids.

The sidewalls and bottom of the forebay and inlet channel will be dredged until the analyses indicate that underlying soil does not contain the above constituents above background or health-based concentrations or until the water table is reached. Sufficient

material will be removed to reach clean-closure standards. The dredged material will be disposed of at an off-site landfill.

After the forebay and the inlet channel have been adequately dredged, it will be filled with river sand or equivalent for any future use of the areas. River sand will be used to completely fill in the Oil/Water Separator.

The river sand will be placed in the entire Separator (forebay, channel, plus the main cells) in 12-inch layers compacted to a dry density of at least 95 percent of its Standard Proctor maximum dry density as determined by American Society for Testing and Materials (ASTM) methods. After the Separator has been filled, it will be graded to conform with the surrounding area.

The closure of the Separator will be performed by a contractor to be selected at the time of closure.

The first step in closing the Interconnecting Ditches will be to remove the impounded water. This will be done by closing the inlet to the Oil/Water Separator and allowing all of the water in the system to be worked off in the plant's biotreating system and eventually discharged to the river under the plant's LPDES Permit.

Once the system has drained, the sidewalls and bottom of the Interconnecting Ditches will be dredged and tested as described above. The dredged material will be disposed of at an off-site landfill.

After the Interconnecting Ditches have been adequately dredged, they will be filled in with soil. The ditch will be filled to the proper elevation which is the natural grade of the surrounding ground.

After the Interconnecting Ditches have been filled in and graded to a uniform grade, the soil will be fertilized. After the soil is prepared, a natural grass called Centipede or other native grass will be planted. Centipede is a grass which is native to the area and should flourish on the site. The vegetative cover will help prevent erosion of the soil.

The first step in closing the Storm Water Impoundment Basin will be to remove the impounded water. This will be done by stopping the inflow to the Oil/Water Separator and allowing the impounded storm water to be worked off in the plant's Storm Water Management System.

Once most of the storm water has been pumped out of the Basin, the sidewalls and bottom of the Basin will be dredged. The dredged material will be sampled and analyzed as described above. The dredged material will be disposed of in an off-site landfill.

After the Basin pond has been adequately dredged, sidewall and bottom sediment samples will be collected and tested for contaminants related to the waste streams in order to confirm clean closure. It will be filled in with clean soil only after confirmatory test results

submitted and approved from LDEQ. Because the solid waste is to be removed from the former Basin site, a clay cap is not necessary.

After the Basin has been filled and graded, the soil will be fertilized. After the soil is prepared, a natural grass called Centipede or other native grass will be planted. Centipede is a grass which is native to the area and should flourish on the site. The vegetative cover will help minimize erosion of the top soil.

c. the estimated cost of closure of the facility, based on the cost of hiring a third party to close the facility at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive.

The estimated cost of closure of the Storm Water Treatment System located at Chevron's Oak Point Plant in Belle Chasse, Louisiana, is presented in Appendix V.

- 2. The closure plan for Type I and II landfills and surface impoundments must include:
  - a. a description of the final cover and the methods and procedures used to install the cover;

A description of the final cover and the methods and procedures used to install the cover are discussed in the response to Section 521.J.1.b. A final cover is not anticipated because clean closure is proposed.

b. an estimate of the largest area of the facility ever requiring a final cover at any time during the active life;

An estimate of the largest area of the facility ever requiring a final cover at any time during the active life is discussed in the response to Section 521.J.1.b. A final cover is not anticipated because clean closure is proposed.

c. an estimate of the maximum inventory of solid waste ever on-site over the active life of the facility; and

The maximum inventory of solid waste ever on site is estimated to be 4,025 tons of dewatered material from the basin. This is the amount of sludge removed during a previous desludging event.

d. a schedule for completing all activities necessary for closure.

The closure of the Storm Water Oil/Water Separator, the Interconnecting Ditches, and the Impoundment Basin of the Storm Water Treatment System will be performed simultaneously. These three solid waste units are integral parts of the plant's Storm Water Treatment System and operate in conjunction with each other. A staged closure plan would not be practical. The closure schedule is shown in Appendix V for all three parts of this one solid waste facility.

- 3. The closure plan for all Type I and II facilities and Type III woodwaste and construction/demolition debris facilities shall include the following:
  - a. the sequence of final closure of each unit of the facility, as applicable;

### Refer to the response to Section 521.J.1.b.

b. a drawing showing final contours of the facility; and

# The final contours of this facility will be undifferentiable because it will be filled to the natural grade of the surrounding land.

c. a copy of the document that will be filed upon closure of the facility with the official parish recordkeeper indicating the location and use of the property for solid waste disposal, unless the closure plan specifies a clean closure.

# Clean closure is planned for the Storm Water Treatment System. Consequently, this section is not applicable.

- K. Facility Post-Closure. Standards governing post-closure requirements are contained in LAC 33:VII.711.F (Type I and II landfills), LAC 33:VII.713.F (Type I and II surface impoundments), LAC 33:VII.715.F (Type I and II landfarms), and LAC 33:VII.721.E (Type III construction and demolition debris and woodwaste landfills).
  - 1. The post-closure plan for all facilities must include the following:
    - a. specification of the long-term use of the facility after closure, as anticipated; and
    - the cost of conducting post-closure of the facility, based on the estimated cost of hiring a third party to conduct post-closure activities in accordance with the closure plan.
  - 2. The post-closure plan for Type I and II facilities must include the following:
    - a. the method for conducting post-closure activities, including a description of the monitoring and maintenance activities and the frequency at which they will be performed;
    - b. the method for abandonment of monitoring systems, leachate collection systems, gas-collection systems, etc.;
    - c. measures planned to ensure public safety, including access control and gas control; and
    - d. a description of the planned uses of the facility during the post-closure period.

Post-closure is not anticipated for the Storm Water Treatment System because clean closure is proposed. Hence, Section 521.K is not applicable.

- L. Financial Responsibility. Standards governing financial responsibility are contained in LAC 33:VII.727. A section documenting financial responsibility according to LAC 33:VII.727 which contains the following information, must be included for all facilities:
  - the name and address of the person who currently owns the land and the name and address of the person who will own the land if the standard permit is granted (if different from the permit holder, provide a copy of the lease or document which evidences the permit holder's authority to occupy the property); or

The Storm Water Treatment System located at the Oak Point Plant in Belle Chasse, Louisiana, is owned/leased and operated by Chevron Oronite Company, LLC. Chevron Oronite Company, LLC, is a wholly owned subsidiary of the Chevron Corporation and has four operating divisions. The Oak Point Plant is part of the Oronite Additives Division. The address for Chevron Corporation is 6001 Bollinger Canyon Road, San Ramon, California 94583-2324.

2. the name of the agency or other public body that is requesting the standard permit; or, if the agency is a public corporation, its published annual report; or, if otherwise, the names of the principal owners, stockholders, general partners, or officers;

A copy of Chevron Corporation's 2006 Annual Report is presented as Appendix W of this permit application.

- 3. evidence of liability coverage, including:
  - a. personal injury, employees, and the public (coverage, carriers, and any exclusions or limitations);
  - b. property damage (coverage and carrier);
  - c. environmental risks; and

Evidence of coverage for the liabilities listed is given by the Letter of Credit and standby trust fund included in Appendix X. The current Letter of Credit is #839BCG0700166 in the amount of \$1,000,000 (One million dollars) and is intended to meet the financial responsibility during operation of this unit. The original of this letter of credit has been provided to LDEQ by separate cover. Please see the relevant responses in LAC33:VII727.A.1 that relate to the applicable financial assurance mechanism.

4. evidence of a financial assurance mechanism for closure and/or post-closure care and corrective action for known releases when needed.

The estimated cost of closure is included in Appendix V. Chevron has chosen the financial test and corporate guarantee mechanism to show proof of financial responsibility for

closure and post-closure care as well as for liability coverage, and the supporting documents are included in Appendix X. Additionally, responses to LAC 33.VII.727 (Financial Assurance) are included in a separate tab of this solid waste permit renewal application.

M. Special Requirements. The administrative authority may require additional information for special processes or systems and for supplementary environmental analysis.

Chevron acknowledges that LDEQ may require additional information for special processes or systems and for supplementary environmental analysis.

### §523. Part III: Additional Supplementary Information

The following supplementary information is required for all solid waste processing and disposal facilities. All responses and exhibits must be identified in the following sequence to facilitate the evaluation:

A. a discussion demonstrating that the potential and real adverse environmental effects of the facility have been avoided to the maximum extent possible;

The potential and real adverse environmental effects of the existing facility have been avoided to the maximum extent possible. Chevron's Oak Point Plant is an existing facility that was built at the current location in 1943. Chevron's facility is operated in accordance with all applicable environmental laws.

In complying with environmental requirements and for the purpose of avoiding environmental effects, Chevron has:

- 1. Established a groundwater monitoring program to detect any potential contamination;
- 2. Diked the plant site to prevent runoff of plant storm water and run-on of storm water from adjacent property; and
- 3. Built a Storm Water Treatment System including a 7 million gallon Impoundment Basin for holding and treatment of plant storm water.

Discharges from the Oak Point Plant are regulated and controlled by the following permits:

Air Quality:

Title V Permit No. 2240-00001-V4

Water Discharge:

LPDES Permit No. LA 00005738

Multi-Sector General Permit No. LAR 05M735

Storm Water Construction Permit No. LAG541343

**Underground Injection:** 

UIC Permit No. 96-08 WD

Operation of the plant is in accordance with these permits and reports are regularly made to the permitting agencies as required by the appropriate regulations.

The emergency contingency plans for the Oak Point Plant are consolidated into the "Emergency Response Manual" which is summarized in Appendix H.

Chevron has upgraded its environmental facilities as applicable technology becomes available and as regulations require. Chevron is committed to maintaining all operations in accordance with all applicable laws and regulations. Chevron Corporation Policy No. 530 states that operating facilities will comply with all local, state, and federal laws. This will ensure that Chevron will continue to maintain facilities using applicable technology which is available and required.

B. a cost-benefit analysis demonstrating that the social and economic benefits of the facility outweigh the environmental-impact costs;

The social and economic benefits of the existing facility outweigh the environmental impact costs. The Oak Point Plant provides major social and economic benefits on both the local and national levels. Chevron's Oak Point Plant provides direct employment for about 350 employees and 110 contractors in its lube oil additive manufacturing operations. Chevron is an employer of Plaquemines Parish residents and contributes to the local economy by utilizing the services of area businesses. Chevron produces specialty products which have essential uses in major segments of the transportation industry, including automotive, railroad, and national defense applications. As of 2001, the replacement value of the plant was \$661 million. This includes the \$100 million investment made during 1999 and 2000 plant expansions.

The environmental impact costs have also been avoided and reduced to the maximum extent practicable. Chevron operates the facility in accordance with all applicable laws and regulations as explained in the response to Section 523.A. Chevron Corporation Policy No. 530 states that operating facilities will comply with all local, state, and federal laws.

C. a discussion and description of possible alternative projects which would offer more protection to the environment without unduly curtailing nonenvironmental benefits; and

Chevron's Oak Point Plant is an existing facility. The plant was built at its current site in 1943. In the response to Section 523.A, Chevron described how the environmental impacts from operation of the plant have been avoided to the maximum extent practicable. In the response to Section 523.B, Chevron described the major nonenvironmental benefits from the plant and how they outweigh environmental impact costs. In view of the fact that the plant site is already utilized for the existing facility, no alternative projects would offer more protection to the environment than the existing facility without unduly curtailing nonenvironmental benefits.

D. a discussion of possible alternative sites that would offer more protection to the environment without unduly curtailing nonenvironmental benefits; and

Chevron's Oak Point Plant is an existing facility. The plant was built at the current site in 1943. Because the Oak Point Plant is an existing facility, it is no longer capable of being constructed on an alternative site. No alternative sites will offer more protection to the environment than the existing site without unduly curtailing nonenvironmental benefits. In addition, construction of a new facility at another site would involve abandonment of the

existing facility having a capital investment of \$611 million (2001 value) and at which the environmental impacts have been reduced to the maximum extent practicable. It would also result in the loss of the major social and economic benefits from the plant described in the response to Section 523.B. Construction of a new facility would require a new capital expenditure for construction in at least this amount. This would involve the unnecessary use of pristine land areas with no new benefits beyond those currently being provided. This would be a needless expense that would not result in any social or economic benefits beyond those already provided and that would have an adverse impact on the local economy.

E. a discussion and description of the mitigating measures which would offer more protection to the environment than the facility, as proposed, without unduly curtailing nonenvironmental benefits.

Chevron uses all mitigating measures which offer protection to the environment as required by the applicable environmental laws, regulations, and permits described in the response to Section 523.A. There are no other mitigating measures which would offer protection to the environment without unduly curtailing nonenvironmental benefits.

# CHAPTER 7 - SOLID WASTE STANDARDS SUBCHAPTER E - FINANCIAL ASSURANCE FOR ALL PROCESSORS AND DISPOSERS OF SOLID WASTE

### §709. Standards Governing All Solid Waste Disposal Facilities (Type I and II)

#### A. Location Characteristics

Access to facilities by land or water transportation shall be by all-weather roads or
waterways that can meet the demands of the facility and are designed to avoid, to the
extent practicable, congestion, sharp turns, obstructions, or other hazards conducive
to accidents; and the surface roadways shall be adequate to withstand the weight of
transportation vehicles.

Access to the facility by land transportation is by all-weather roads that can meet the demands of the facility and are designed to avoid, to the extent practicable, congestion, sharp turns, obstructions, or other hazards conducive to accidents; and the surface roadways are adequate to withstand the weight of transportation vehicles.

2. Facilities that dispose of putrescible solid waste shall not be located within 10,000 feet of any public-use airport runway end used by turbojet aircraft or within 5,000 feet of any public-use airport runway end used by only piston-type aircraft. Permit applicants for proposed Type II landfills to be located within a 5-mile radius of any airport runway must notify the affected airport and the Federal Aviation Administration.

This section is not applicable because the waste disposed at the surface impoundment is not putrescible.

3. Environmental Characteristics. Facilities located in, or within 1,000 feet of, swamps, marshes, wetlands, estuaries, wildlife-hatchery areas, habitat of endangered species, archaeologic sites, historic sites, publicly owned recreation areas, and similar critical environmental areas shall be isolated from such areas by effective barriers that eliminate probable adverse impacts from facility operations.

The above requirement has been addressed in Section 521.A.1.e. of this permit application.

- 4. Units of a facility which have not received waste prior to October 9, 1993, shall not be located in wetlands, unless the permit holder or applicant can make the following demonstrations to the administrative authority:
  - a. where applicable under Section 404 of the Clean Water Act or applicable state wetlands laws, the presumption that a practicable alternative to the proposed landfill is available which does not involve wetlands is clearly rebutted;

The Storm Water Treatment System has received waste prior to October 9, 1993; therefore, this section is not applicable. Furthermore, the facility is not located in a designated wetlands area (see Figure 6).

- b. the construction and operation of the facility will not:
  - i. cause or contribute to violations of any applicable state water-quality standard;
  - ii. violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act;
  - jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; and
  - iv. violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary;

The Storm Water Treatment System is an existing facility; hence, construction standards are not applicable. The operation of the facility, however, does not cause or contribute to violations of any applicable state water-quality standard; violate any applicable toxic effluent standard or prohibition under Section 307 of the Clean Water Act; jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of a critical habitat, protected under the Endangered Species Act of 1973; or violate any requirement under the Marine Protection, Research, and Sanctuaries Act of 1972 for the protection of a marine sanctuary.

- c. the facility will not cause or contribute to significant degradation of wetlands. The owner or operator must demonstrate the integrity of the facility and its ability to protect ecological resources by addressing the following factors:
  - i. erosion, stability, and migration potential of native wetland soils, muds, and deposits used to support the facility;
  - ii. erosion, stability, and migration potential of dredged and fill materials used to support the facility;
  - iii. the volume and chemical nature of the waste managed in the facility;
  - iv. impacts on fish, wildlife, and other aquatic resources and their habitat from release of the solid waste;
  - v. the potential effects of catastrophic release of waste to the wetland and the resulting impacts on the environment; and

vi. any additional factors, as necessary, to demonstrate that ecological resources in the wetland are sufficiently protected;

The Storm Water Treatment System is not located in a wetlands area (refer to Figure 6). Consequently, this section is not applicable.

d. to the extent required under Section 404 of the Clean Water Act or applicable state wetlands laws, steps have been taken to attempt to achieve no net loss of wetlands (as defined by acreage and function) by first avoiding impacts to wetlands to the maximum extent practicable as required by Paragraph A.4 of this Section; then, minimizing unavoidable impacts to the maximum extent practicable; and, finally, offsetting remaining unavoidable wetland impacts through all appropriate and practicable compensatory mitigation actions (e.g., restoration of existing degraded wetlands or creation of man-made wetlands); and

The Storm Water Treatment System is not located in a wetlands area (refer to Figure 6). Consequently, this section is not applicable.

e. sufficient information is available to make a reasonable determination with respect to these demonstrations.

The Storm Water Treatment System is not located in a wetlands area (refer to Figure 6). Consequently, this section is not applicable.

5. Units of a facility which have not received waste prior to October 9, 1993, shall not be located within 200 feet (60 meters) of a fault that has had displacement in Holocene time unless the permit holder or applicant demonstrates to the administrative authority that an alternative setback distance of less than 200 feet will prevent damage to the structural integrity of the unit and will be protective of human health and the environment.

The Storm Water Treatment System has received waste prior to October 9, 1993; hence, this section is not applicable. Furthermore, a review of geologic information for the site indicates that there are no known faults with movement in Holocene time expressed on the surface within 200 feet of the facility. Please refer to Section 521.A.2.b.

6. Disposal facilities may be subject to a comprehensive land-use or zoning plan established by local regulations or ordinances.

#### B. Facility Characteristics

- 1. Perimeter Barriers, Security, and Signs
  - a. Facilities must have a perimeter barrier around the facility that prevents unauthorized ingress or egress, except by willful entry.

Perimeter barriers, security, and signs are discussed in Section 521.B.1.b of this permit application.

b. During operating hours, each facility entry point shall be continuously monitored, manned, or locked.

During operating hours, all entry points to the plant are either manned or locked.

c. During non-operating hours, each facility entry point shall be locked.

During non-operating hours, all entry points to the plant are either manned or locked.

d. Facilities that receive wastes from off-site sources shall post readable signs that list the types of wastes that can be received at the facility.

The Storm Water Treatment System does not receive wastes from off-site sources; consequently, this section is not applicable.

#### 2. Buffer Zones

a. Buffer zones of not less than 200 feet shall be provided between the facility and the property line. A reduction in this requirement shall be allowed only with the permission, in the form of a notarized affidavit, of the adjoining landowner and occupants. A copy of the notarized affidavit waiving the 200-foot buffer zone shall be entered in the mortgage and conveyance records of the parish for the adjoining landowner's property. Buffer zone requirements may be waived or modified by the administrative authority for areas of landfills which have been closed in accordance with these regulations and for existing facilities, or in accordance with LAC 33:VII.307.

The above requirement is addressed in Section 521.B.1.c of this permit application.

b. No storage, processing, or disposal of solid waste shall occur within the buffer zone.

Solid waste is not stored, processed, or disposed of within the buffer zone.

3. Fire Protection and Medical Care. Facilities shall have access to required fire protection and medical care, or such services shall be provided internally.

Chevron has an emergency response system in place that complies with the above requirement. In addition, emergency procedures are addressed in Appendix H.

4. Landscaping. All proposed facilities, other than those which are located within the boundaries of a plant, industry, or business which generates the waste to be processed or disposed of, must provide landscaping to improve the aesthetics of the facility.

Please refer to the response to Section 521.B.1.e. Because the Storm Water Treatment System is an existing unit within the boundaries of the Chevron plant site, this regulation is not applicable.

- 5. Receiving and Monitoring Incoming Wastes
  - a. Each facility shall be equipped with a device or method to determine quantity (by wet-weight tonnage); sources (whether the waste was generated in-state or out-of-state and, if it is industrial solid waste, where it was generated); and types of incoming waste (i.e., commercial, residential). The facility shall also be equipped with a device or method to control entry of the waste and prevent entry of unrecorded or unauthorized deliverables (i.e., hazardous waste, PCB waste, and unauthorized or unpermitted solid waste). At Type II landfills, this method shall include random inspections of incoming waste loads at a frequency to reasonably ensure exclusion of such prohibited wastes.

Waste handling and inventory procedures are presented in the Operation and Maintenance Plan included as Appendix U.

b. Each facility shall be equipped with a central control and recordkeeping system for tabulating the information required in Subparagraph B.5.a of this Section.

The recordkeeping system for waste inventory is presented in the Operation and Maintenance Plan (Appendix U).

6. Discharges from operating units of all facilities must be controlled and must conform to applicable state and federal laws including the federal Clean Water Act and Louisiana Water Pollution Control Law. Applications for applicable state and federal discharge permits must be filed before a standard permit may be issued.

The appropriate permits are in existence at Chevron.

#### C. Facility Geology

- 1. Soils
  - a. Except as provided in Subparagraph C.1.b of this Section, facilities shall have natural soils of low permeability for the area occupied by the solid waste facility, including vehicle parking and turnaround areas, that should provide a barrier to prevent any penetration of surface spills into groundwater aquifers underlying the area or to a sand or other water-bearing strata that would provide a conduit to such aquifers.

Refer to the response to Sections 521.D.1.a and 521.E.1.a.

b. A design for surfacing natural soils that do not meet the requirement in Subparagraph C.1.a of this Section shall be prepared and installed under the supervision of a registered engineer, licensed in the state of Louisiana, with expertise in geotechnical engineering and geohydrology. Written certification by the engineer that the surface satisfies the requirements of Subparagraph C.1.a of this Section shall be provided.

The surface of natural soils do meet the requirement in Section 709.C.1.a; hence, this section is not applicable.

- c. The subsurface soils and groundwater conditions at Type I facilities and at Type II surface impoundments and landfills shall be characterized by a registered engineer, licensed in the state of Louisiana, with expertise in geotechnical engineering and geohydrology or by a geologist with expertise in these fields. The characterization shall meet the following guidelines.
  - i. Geotechnical borehole spacing shall be no greater than 450 feet (minimum of four borings required).
  - ii. All boreholes shall extend to a depth of at least 30 feet below the lowest point of the excavation. At least 10 percent of the borings (minimum of three borings) shall extend to 100 feet below grade level to characterize the shallow geology.
  - iii. All borings shall be continuously sampled to at least 30 feet below the base of excavation, with the use of thin-wall and/or split-spoon devices or similar coring devices. After 30 feet, samples shall be at 5-foot intervals.
  - iv. Borings, geotechnical field tests, and laboratory tests shall be conducted according to the standards of the American Society for Testing and Materials (ASTM) or the Environmental Protection Agency (EPA), or other applicable standards approved by the administrative authority.

The subsurface soil and groundwater conditions at the Oak Point Plant are described in Sections 521.D and E. The soil core logs are provided in Appendix L. Soil sampling methods conformed to ASTM or EPA standards available at the time of sampling.

- d. The subsurface soils and groundwater conditions at Type II landfarms shall be characterized by a licensed engineer with expertise in geotechnical engineering and geohydrology or by a geologist with expertise in these fields. The characterization shall meet the following guidelines.
  - i. The number of borings shall be sufficient to reflect the subsurface soils and groundwater conditions for the facility.

- ii. All boreholes shall extend to a depth of at least 30 feet below the lowest point of the zone of incorporation.
- iii. All borings shall be continuously sampled to at least 30 feet below the base of the zone of incorporation with the use of thin wall and/or split spoon devices or similar devices.
- iv. Borings, geotechnical field tests, and laboratory tests shall be conducted according to the standards of the American Society for Testing and Materials (ASTM) or the Environmental Protection Agency (EPA) or other applicable standards approved by the administrative authority.

# The Storm Water Treatment System is not a landfarm; hence, this section is not applicable.

2. Units of a facility located in a seismic impact zone which have not received waste prior to October 9, 1993, shall be designed and operated so that all containment structures, including liners, leachate collection systems, and surface water control systems, can withstand the stresses caused by the maximum horizontal acceleration in lithified earth material for the site.

# The Storm Water Treatment System has received waste prior to October 9, 1993; hence, this section is not applicable.

- 3. Facilities shall not be located in an unstable area unless the permit holder or applicant can demonstrate that the facility is designed to ensure the integrity of structural components, such as liners, leak-detection systems, leachate collection, treatment and removal systems, final covers, run-on/runoff systems (or any other component used in the construction and operation of the facility that is necessary for the protection of human health or the environment). In determining whether an area is unstable, the permit holder or applicant must consider, at a minimum, the following factors:
  - a. on-site or local soil conditions that may result in significant differential settling;
  - b. on-site or local geologic or geomorphological features; and
  - on-site or local human-made features or events (both surface and subsurface).

# The facility is not located in an unstable area. Please see the response to Section 521.D.1.g.

#### D. Implementation Plans

1. All facilities shall have implementation plans.

The Storm Water Treatment System is an existing facility; hence, this section is not applicable.

The implementation plan must include a plan for closing and upgrading existing
operating areas if the application is for expansion of a facility or construction of a
replacement facility.

This application is a renewal solid waste permit application for the existing solid waste unit at the facility as requested by LDEQ; it is not for expansion of the Storm Water Treatment System or construction of a replacement system. Hence, this section is not applicable.

#### E. Groundwater Monitoring

- 1. Groundwater Monitoring System
  - a. At each facility, a groundwater-monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer (and the uppermost water-bearing permeable zone which will yield sufficient quantities of water for sampling if different from the uppermost aquifer and if deemed necessary by the administrative authority for adequate groundwater monitoring at the facility) that:
    - i. represent the quality of the background groundwater that has not been affected by leakage from a unit; and

Monitor Wells MW-14R (for the Storm Water Oil/Water Separator and Interconnecting Ditches) and MW-15 (for the Storm Water Impoundment Basin) are the upgradient wells yielding samples representing the quality of background from the uppermost aquifer (30-Foot Zone).

- ii. represent the quality of groundwater passing the relevant point of compliance. For the purposes of these regulations, the relevant point of compliance is the vertical surface which is located no more than 150 meters downgradient from the unit(s) being monitored and extends down into the uppermost aquifer underlying the facility and any other permeable zones being monitored. The relevant point of compliance must be on property owned or controlled by the permit holder and must be selected and subject to the approval of the administrative authority based on at least the following factors:
  - (a). hydrological characteristics of the facility and the surrounding land;
  - (b). volume and physical and chemical characteristics of the leachate;
  - (c). quantity, quality, and direction of flow of groundwater;

- (d). proximity and withdrawal rate of the groundwater users;
- (e). availability of alternative drinking water supplies;
- (f). existing quality of the groundwater, including other sources of contamination and their cumulative impacts on the groundwater, and whether the groundwater is currently used or reasonably expected to be used for drinking water;
- (g). public health, safety, and welfare effects; and
- (h). practicable capability of the owner or operator.

Storm Water Oil/Water Separator - Monitor Wells MW-13 and MW-50 are provided as the relevant point of compliance wells (downgradient) for the uppermost aquifer.

Interconnecting Ditches - Monitor Wells MW-13 and MW-50 are also provided for the Ditches as the relevant point of compliance wells (downgradient) for the uppermost aquifer.

Storm Water Impoundment Basin - Monitor Wells MW-16R, MW-17R, and MW-18R are provided as the relevant point of compliance wells (downgradient) for the uppermost aquifer.

These wells are shown on Figure 12.

- b. Location of Wells
  - i. Enough monitoring wells must be located hydraulically upgradient of the facility to yield samples that represent background groundwater quality as required in Subparagraph E.1.a of this Section.
  - ii. A minimum of one upgradient well per zone monitored is required.
  - iii. Monitoring wells other than upgradient of the facility may be sampled for background groundwater quality if:
    - (a). hydrologic conditions do not allow the permit holder to determine which wells are hydraulically upgradient; or
    - (b). sampling at other wells will provide an indication of background groundwater quality that is more representative than sampling of upgradient wells.
  - iv. Enough monitoring wells must be located hydraulically downgradient from the facility to yield samples that are representative of the groundwater

passing the relevant point of compliance. At least two downgradient wells per zone monitored must be provided. The downgradient wells must be screened in the same zone as the upgradient wells. Spacing between downgradient wells shall not exceed 800 feet.

- v. The number, spacing, and depths of monitoring wells shall be determined based upon site-specific technical information that must include thorough characterization of:
  - (a). aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and
  - (b). saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer; including, but not limited to: thickness, stratigraphy, lithology, hydraulic conductivities, porosities, and effective porosities.
- vi. The administrative authority will consider for approval multi-unit groundwater monitoring systems, provided these systems meet the requirements of Paragraph E.1 of this Section and will be as protective of human health and the environment as groundwater monitoring systems for individual units.
- vii. The administrative authority may modify the requirements of Subparagraph E.l.b of this Section for site-specific considerations in approving groundwater monitoring systems for ditches.

Please refer to the response to Section 521.C for a description of hydrogeologic conditions and Appendix P for the Groundwater Sampling Plan. The location and well cross section of monitor wells are shown on Figures 12, 15, 16, 17, and 31.

#### c. Well Construction

- Well construction shall be in accordance with the "Water Wells Rules, Regulations, and Standards, State of Louisiana" (LAC 70:Part XIII) as adopted by the Louisiana Department of Transportation and Development, Water Resources Section.
- ii. Construction of monitoring wells for facilities regulated by the department shall require approval of the administrative authority prior to construction.
- iii. In addition to the construction standards set forth in the "Water Wells Rules and Regulations," the following is required.

- (a). All wells must have protective casing with locking covers and a secure locking device in place.
- (b). All wells must have guard posts firmly anchored outside the well slab, but not in contact with the slab.
- (c). The maximum allowable screen length must not exceed 10 feet.
- (d). The borehole diameter must allow at least 3 inches between the well casing and the borehole wall.
- (e). A sign or plate must be permanently affixed to the protective well casing and must prominently display:

well identification number:

identification of well as upgradient or downgradient;

elevation of top of well casing in relation to mean sea level;

screen depth in relation to mean sea level; and

date of well installation and any subsequent repairs.

The solid waste monitor well system was upgraded in 1992 and 1993 in accordance with a work plan approved by the Solid Waste Division. The report, dated June 1993, was forwarded to the Solid Waste Division.

- d. Post Construction. Within 90 days after construction of the wells, the permit holder or applicant must submit to the Office of Environmental Services, Permits Division well-completion details to verify that the wells were constructed according to the approved specifications and to document construction procedures. A permit modification fee will not be required. Well-completion details should include, but are not limited to:
  - i. daily field notes documenting construction procedures and any unusual occurrences such as grout loss, etc.;
  - ii. boring log for each well including surface elevation(s) with respect to mean sea level or comparable reference points;
  - iii. as-built diagrams for each well showing all pertinent features such as elevation of reference point for measuring groundwater levels, screen interval, and ground surface. If features change from the approved plans, then a permit-modification request must be submitted in accordance with LAC 33:VII.517.

Construction details of Monitor Wells MW-14R, MW-13, MW-50, MW-15, MW-16R, MW-17R, and MW-18R are provided in Appendix L.

- e. Plugging and Abandonment of Monitoring Wells and Geotechnical Borings
  - i. The "Water Wells Rules and Regulations, State of Louisiana" (LAC 70:Part XIII), as adopted by the Louisiana Department of Transportation and Development, Water Resource Section, shall apply to all plugging and abandonment of wells and holes including, but not limited to, observation wells, monitoring wells, piezometer wells, leak-detection wells, assessment wells, recovery wells, abandoned pilot holes, test holes, and geotechnical boreholes.

All plugging and abandonment activities have been conducted in accordance with the applicable regulations. Forms for wells previously plugged and abandoned are provided in Appendix M. If any monitor wells and/or geotechnical borings need to be plugged and abandoned in the future, they will be plugged and abandoned in accordance with the Water Wells Rules and Regulations, State of Louisiana (LAC 70:XIII) and the current version of the LDEQ and LDOTD handbook entitled Construction of Geotechnical Boreholes and Groundwater Monitoring Well Systems.

- ii. In addition to the standards in LAC 70:Part XIII, the following standards shall apply to plugging and abandonment.
  - (a). For any well, the primary method of plugging and abandonment shall be removal of the well's casing and other components of the well including but not limited to the screen, grout, bentonite seal, filter pack, concrete slab, protective casing, guard posts, and native soil in immediate contact with the grout and subsequent installation of cement-bentonite grout, from the bottom of the resulting borehole to the ground surface using the tremie method.
  - (b). In areas where all or a part of the well's casing and other components of the well cannot be plugged and abandoned in accordance with the procedure stated in Subclause E.1.e.ii.(a) of this Section, the well shall be plugged and abandoned by installation of cement-bentonite grout inside the well's casing, from the bottom of the well to the ground surface, provided that the annular seal is demonstrated to be adequately sealed and the following items are submitted:
    - (i). supporting documentation, prior to plugging the well that demonstrates that removal of all or part of the well's casing and other components of the well in accordance with the procedure stated in Subparagraph E.1.e of this Section, will be detrimental to the environment; and/or

(ii). certification and supporting documentation by a qualified professional that shows that removal of the well's casing was attempted and that continued attempts to remove all or a part of the well's casing and other components of the well as stated in Subparagraph E.1.e of this Section, would have been detrimental to the environment.

All monitor wells and/or geotechnical borings shall be plugged and abandoned in accordance with the *Water Wells Rules and Regulations, State of Louisiana* (LAC 70:XIII), and the current version of the LDEQ and LDOTD handbook entitled *Construction of Geotechnical Boreholes and Groundwater Monitoring Well Systems*.

(c). After plugging and abandoning a well, all surface features of the well including but not limited to the concrete slab, guard posts and protective casing, shall be dismantled and disposed of in an environmentally sound manner and the surface shall be restored to its original condition.

After plugging and abandoning a well, all surface features of the well including but not limited to the concrete slab, guard posts, and protective casing shall be dismantled and disposed of in an environmentally sound manner and the surface shall be restored to its original condition.

(d). The permit holder must notify the Office of Environmental Services, Permits Division of the plugging and abandonment of monitoring wells or geotechnical borings and keep records of such abandonments.

Chevron will notify LDEQ of the plugging and abandonment of monitor wells or geotechnical borings and keep records of such abandonments.

f. Monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

Chevron will operate and maintain monitor wells, piezometers, and other measurement, sampling, and analytical devices so that they perform to design specifications throughout the life of the monitoring program.

- 2. Groundwater Sampling and Analysis Requirements
  - a. A groundwater-monitoring program must be implemented at each facility which includes consistent sampling and analysis procedures that ensure monitoring results are representative of groundwater quality at the background and downgradient well locations.

- b. A groundwater sampling and analysis plan must be prepared which meets the requirements of Subparagraph E.2.a of this Section as well as the requirements of LAC 33:VII.3005, and which includes procedures and techniques for:
  - sample collection which ensures that collected samples are representative of the zone(s) being monitored and prevents cross-contamination of or tampering with samples;
  - ii. sample preservation and shipment which ensure the integrity and reliability of the sample collected for analysis;
  - iii. chain of custody control; and
  - iv. quality-assurance/quality-control, including detection limits, precision and accuracy of analyses, field blanks, and laboratory spikes and blanks.
- c. The sampling and analysis plan must also include the:
  - selection of parameters or constituents to be sampled and analyzed during detection monitoring and justification for parameters or constituents where applicable;
  - ii. identification of analytical procedures to be followed (reference source of analytical method);
  - iii. sampling frequency during the detection monitoring program;
  - iv. statistical method to be used in evaluating the groundwater-monitoring data for each groundwater parameter or constituent sampled at each monitoring well; and
  - v. practical quantitation limit for each parameter or constituent.

#### Please see the Groundwater Sampling Plan in Appendix P.

d. Background groundwater quality must be established for the facility in a hydraulically upgradient well(s), or other well(s) as provided in Clause E.1.b.iii of this Section, for each groundwater parameter or constituent.

Background groundwater quality is established based on data from Well MW-14R and MW-15, which are upgradient of the plant site.

- e. Statistical Methods
  - i. The number of samples collected to establish groundwater quality data must be consistent with the appropriate statistical procedures used.

- ii. One of the following statistical methods to be used in evaluating groundwater data must be specified in the sampling and analysis plan for each parameter or constituent to be monitored. The statistical test chosen shall be conducted separately for each parameter or constituent in each well:
  - (a). a parametric analysis of variance (ANOVA) followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's mean and the background mean levels for each parameter or constituent;
  - (b). an analysis of variance (ANOVA) based on ranks followed by multiple comparisons procedures to identify statistically significant evidence of contamination. The method must include estimation and testing of the contrasts between each compliance well's median and the background median levels for each parameter or constituent;
  - (c). a tolerance or prediction interval procedure in which an interval for each parameter or constituent is established from the distribution of the background data, and the level of each parameter or constituent in each compliance well is compared to the upper tolerance or prediction limit;
  - (d). a control chart approach that gives control limits for each parameter or constituent;
  - (e). another statistical test method that meets the performance standards of Clause E.2.e.iii of this Section. The permit holder must place a justification for this alternative in the operating record and notify the administrative authority of the use of this alternative test. The justification must demonstrate that the alternative method meets the performance standards of Clause E.2.e.iii of this Section.

Chevron proposes to use the control chart method (intra well) for evaluation of groundwater quality related to the Storm Water Treatment System. The method conforms to USEPA guidance document Statistical Evaluation of Groundwater Monitoring Data at RCRA Facilities, EPA/530-SW-89-026 February 1989 and as amended July 1992, for a combined Shewhart/CUSUM Control Chart for parameters that are natural to the groundwater environment (i.e., total dissolved solids [TDS], total organic carbon [TOC], zinc, pH, and specific conductivity). Nonnaturally occurring parameters (benzene, toluene, xylenes, phenol, VPH, and EPH) will be compared to the practical quantitation limit (PQL).

iii. Any statistical method chosen under Clause E.2.e.ii of this Section shall comply with the following performance standards, as appropriate.

- (a). The statistical method used to evaluate groundwater monitoring data shall be appropriate for the distribution of the parameters or constituents. If the distribution of the chemical parameters or constituents or hazardous parameters or constituents is shown by the permit holder to be inappropriate for a normal theory test, then the data should be transformed or a distribution-free theory test should be used. If the distributions for the parameters or constituents differ, more than one statistical method may be needed.
- (b). If an individual well comparison procedure is used to compare an individual compliance well parameter or constituent concentration with background parameters or constituent concentrations or a groundwater protection standard, the test shall be done at a Type I error level no less than 0.01 for each testing period. If a multiple comparisons procedure is used, the Type I experimentwide error rate for each testing period shall be no less than 0.05; however, the Type I error of no less than 0.01 for individual well comparisons must be maintained. This performance standard does not apply to tolerance intervals, prediction intervals, or control charts.
- (c). If a control chart approach is used to evaluate groundwater monitoring data, the specific type of control chart and its associated parameter or constituent values shall be protective of human health and the environment. The parameters or constituents shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each parameter or constituent of concern.
- (d). If a tolerance interval or a predictional interval is used to evaluate groundwater monitoring data, the levels of confidence and, for tolerance intervals, the percentage of the population that the interval must contain, shall be protective of human health and the environment. These parameters or constituents shall be determined after considering the number of samples in the background data base, the data distribution, and the range of the concentration values for each parameter or constituent of concern.
- (e). The statistical method shall account for data below the limit of detection with one or more statistical procedures that are protective of human health and the environment. Any practical quantitation limit (pql) that is used in the statistical method shall be the lowest concentration level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions that are available to the facility.

- (f). If necessary, the statistical method shall include procedures to control or correct for seasonal and spatial variability as well as temporal correlation in the data.
- iv. The permit holder must determine whether or not there is a statistically significant increase over background values for each parameter or constituent required in the particular groundwater monitoring program that applies to the facility, as determined under Paragraph E.3, 4, or 8 of this Section.
  - (a). In determining whether a statistically significant increase has occurred, the permit holder must compare the groundwater quality of each parameter or constituent at each monitoring well designated pursuant to Clause E.1.a.ii of this Section to the background value of that parameter or constituent, according to the statistical procedures and performance standards specified under Clauses E.2.e.ii and iii of this Section.
  - (b). Within 90 days after the date of sampling, the permit holder must determine whether there has been a statistically significant increase over background at each monitoring well.

Chevron will determine whether or not there is a statistically significant increase over background values for each parameter within 90 days after the date of sampling.

- 3. Detection Monitoring Program
  - a. All Type I and II facilities must conduct a detection monitoring program as described in Paragraph E.3 of this Section.
  - b. Initial Sampling
    - i. For a new facility, monitoring wells must be sampled and the analytical data for a sampling event must be submitted to the Office of Environmental Assessment, Environmental Technology Division before waste is accepted.
    - ii. For an existing facility with no wells in place at the time of the application submittal or at the time at which the facility becomes subject to these regulations, the analytical data shall be submitted to the Office of Environmental Assessment, Environmental Technology Division within 90 days after installation of the monitoring wells.
    - iii. A minimum of four independent samples from each well (upgradient and downgradient) must be collected and analyzed during the first sampling event for a facility. Thereafter, at least one sample must be collected and analyzed at each well for each sampling event.

Chevron is currently conducting a detection monitoring program for the Storm Water Treatment System.

- c. For the first year of monitoring and thereafter, sampling and analysis of all wells must be conducted every six months.
- d. The groundwater monitoring program must be conducted for the life of the facility and for the duration of the post-closure care period of the facility which is specified in LAC 33:VII.711.F, 713.F, or 715.F. Groundwater monitoring may be extended beyond the period specified if deemed necessary by the administrative authority.

Semiannual groundwater monitoring will be conducted for the Storm Water Treatment System. Please see the Groundwater Sampling Plan in Appendix P.

- e. The permit holder or applicant must submit four bound copies (8 1/2 by 11 inches) of a report of all groundwater sampling results to the Office of Environmental Assessment, Environmental Technology Division no later than 90 days after each sampling event. The reports must be submitted on forms provided by the administrative authority and shall include at a minimum:
  - i. documentation of the chain of custody of all sampling and analyses;
  - scaled potentiometric surface maps showing monitoring-well locations, groundwater elevations with respect to mean sea level for each stratum monitored;
  - iii. isopleth map for each well of all parameters or constituents or plots by well of concentration of parameters or constituents versus time;
  - iv. for the initial sampling only, a boring log for each well showing the screened interval and ground surface elevation with respect to mean sea level; and
  - v. a statement of whether a statistically significant difference in concentration over background concentrations is detected.

Chevron presently submits and will continue to submit four bound copies (8 1/2 by 11 inches) of a report of all groundwater sampling results to LDEQ no later than 90 days after each semiannual sampling event at the Storm Water Treatment System. The reports will be submitted on forms provided by the Administrative Authority and will include documentation of the chain of custody, a scaled potentiometric map, the control charts, and a statement of whether a statistically significant difference in concentration over background is detected.

- f. If a statistically significant increase over background concentrations is determined for one or more parameters or constituents required to be monitored, the permit holder must:
  - i. notify the administrative authority in accordance with the Notification Regulations and Procedures for Unauthorized Discharge (LAC 33:I.Subpart 2);
  - ii. submit to the Office of Environmental Assessment, Environmental Technology Division, within 14 days after the determination is made, a report that identifies which parameters or constituents were determined to have shown statistically significant changes from background levels; and
  - iii. within 90 days after the determination is made:
    - (a). initiate an assessment monitoring program for the facility meeting the requirements of Paragraph E.4 or 8 of this Section; or
    - (b). submit a report to the Office of Environmental Assessment, Environmental Technology Division demonstrating that a source other than the facility being sampled caused the contamination or that the statistically significant increase resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality.
  - iv. If the administrative authority approves this demonstration in Subclause E.3.f.iii.(b) of this Section in writing, the permit holder may continue the detection monitoring program. If the administrative authority does not approve the demonstration in writing, the permit holder must establish an assessment monitoring program meeting the requirements of Paragraph E.4 of this Section within 90 days after the determination in Subparagraph E.3.f of this Section is made.

Chevron will comply with the notification and reporting requirements listed above if a statistically significant increase over background concentrations is determined for one or more parameters.

- g. Detection Monitoring Parameters or Constituents
  - i. During detection monitoring, Type I landfills and Type I surface impoundments (except Type I landfills that are also Type II landfills and Type I surface impoundments that are associated with such Type I landfills) shall monitor for at least 10 chemical parameters or constituents, both inorganic and organic, which are indicator parameters or constituents or reaction products of the waste and that provide a reliable indication of the presence of contaminants in the groundwater. The administrative authority

may reduce the number of parameters if appropriate based on site-specific and waste-specific consideration. Selection of these parameters or constituents is subject to the approval of the administrative authority and must be based on the following factors:

- (a). types, quantities, and concentrations of constituents in the wastes disposed of at the facility;
- (b). mobility, stability, and persistence of waste constituents or their reaction products in the unsaturated zone beneath the facility;
- (c). detectability of indicator parameters, waste constituents, or their reaction products in the groundwater; and
- (d). concentrations or values and coefficients of variation of the proposed monitoring parameters or constituents in the background groundwater at the facility.

Chevron proposed to include benzene, toluene, xylenes (total), TDS, TOC, phenol, zinc, VPH, EPH, pH, and specific conductivity as detection monitoring parameters. These ten constituents are intrinsic to the wastes handled in the Storm Water Treatment System. These constituents are presently sampled on a semiannual basis.

- ii. During detection monitoring, Type II landfills, including Type II surface impoundments associated with Type II landfills, shall be monitored for all the parameters or constituents listed in LAC 33:VII.3005.Table 1.
- iii. During detection monitoring, Type I landfarms, including runoff and containment areas (ROCAs) or surface impoundments associated with Type I landfarms, shall be monitored for the same parameters or constituents as provided for Type II landfarms in Clause E.3.g.iv of this Section and also for at least six parameters or constituents, both organic and inorganic, which are intrinsic to the wastes being disposed at the facility. The intrinsic parameters or constituents shall be selected on the basis of the factors in Subclauses E.3.g.i.(a)-(d) of this Section and shall be subject to the approval of the administrative authority.
- iv. During detection monitoring, Type II landfarms which receive domestic sewage sludge and any runoff and containment areas (ROCAs) or surface impoundments associated with such landfarms shall be monitored for 5-day biochemical oxygen demand (BOD<sub>5</sub>), fecal coliform, total dissolved solids (TDS), nitrate, total Kjeldahl nitrogen, and polychlorinated biphenyls (PCBs), if applicable.

- v. Type II surface impoundments which receive domestic sewage sludge shall be monitored for the same parameters or constituents as provided for Type II landfarms in Clause E.3.g.iv of this Section.
- vi. The administrative authority may waive or require additional parameters or constituents, based on site-specific or waste-specific information.

Sections 709.E.3.g.ii, iii, iv, v and vi do not apply to the Storm Water Treatment System. Chevron understands that the Administrative Authority may waive or require additional parameters based on site-specific or waste-specific information.

- 4. Assessment Monitoring Program for Type II Landfills and Associated Type II Surface Impoundments
  - a. An assessment monitoring program as described in Paragraph E.4 of this Section is required to be conducted at Type II landfills and associated Type II surface impoundments whenever a statistically significant increase over background concentrations is detected for one or more of the parameters or constituents sampled and analyzed during the detection monitoring program.
  - b. Within 90 days of triggering an assessment monitoring program, and annually thereafter, the permit holder must sample and analyze the groundwater for all the parameters or constituents identified in LAC 33:VII.3005. Table 2. A minimum of one sample from each downgradient well must be collected and analyzed during each sampling event. For any parameter or constituent detected in the downgradient wells as a result of the complete LAC 33:VII.3005. Table 2 analysis, a minimum of four independent samples from each well (background and downgradient) must be collected and analyzed to establish background for the parameters or constituents. The administrative authority:
    - may specify an appropriate subset of the wells to be sampled and analyzed for LAC 33:VII.3005. Table 2 parameters or constituents during assessment monitoring; and
    - ii. may delete any of the LAC 33:VII.3005. Table 2 parameters or constituents for a facility if it can be shown that the omitted parameters or constituents are not reasonably expected to be in or derived from the waste contained in the unit.
  - c. No later than 90 days after the completion of the initial or subsequent sampling events for all LAC 33:VII.3005.Table 2 parameters or constituents required in Subparagraph E.4.b of this Section, the permit holder must submit a report to the Office of Environmental Assessment, Environmental Technology Division identifying the LAC 33:VII.3005.Table 2 parameters or constituents that have been detected. No later than 180 days after completion of the initial or subsequent sampling events for all LAC 33:VII.3005.Table 2 parameters or

constituents required in Subparagraph E.4.b of this Section, the permit holder must:

- resample all wells and analyze for all parameters or constituents in LAC 33:VII.3005.Table 1 and for those parameters or constituents in LAC 33:VII.3005.Table 2 that are detected in response to Subparagraph E.4.b of this Section. At least one sample must be collected from each well (background and downgradient) during these sampling events. This sampling must be repeated semiannually thereafter;
- ii. establish background groundwater concentrations for any parameter or constituent detected pursuant to Subparagraph E.4.b or c of this Section; and
- iii. establish groundwater protection standards for all parameters or constituents detected pursuant to Subparagraph E.4.b or c of this Section. The groundwater protection standards shall be established in accordance with Subparagraph E.4.g of this Section.
- d. If the concentrations of all LAC 33:VII.3005. Table 2 parameters or constituents are shown to be at or below background values, using the statistical procedures in Subparagraph E.2.e of this Section, for two consecutive sampling events, the permit holder must notify the Office of Environmental Assessment, Environmental Technology Division, and upon written approval of the administrative authority, may return to detection monitoring.
- e. If the concentrations of any LAC 33:VII.3005. Table 2 parameters or constituents are above background values, but all concentrations are below the groundwater protection standard established under Subparagraph E.4.g of this Section, using the statistical procedures in Subparagraph E.2.e of this Section, the permit holder must continue assessment monitoring.
- f. If one or more LAC 33:VII.3005. Table 2 parameters or constituents are detected at statistically significant levels above the groundwater protection standard established under Subparagraph E.4.g of this Section, in any sampling event, using the statistical procedures in Subparagraph E.2.e of this Section, the permit holder must, within 14 days of the determination, notify all appropriate local government officials and submit a report to the Office of Environmental Assessment, Environmental Technology Division identifying the LAC 33:VII.3005. Table 2 parameters or constituents which have exceeded the groundwater protection standard. The permit holder must also:
  - within 90 days after the determination is made, submit four bound copies (8
    1/2 x 11 inches) of an assessment plan to the Office of Environmental
    Assessment, Environmental Technology Division, as well as any necessary
    permit modification, to the Office of Environmental Services, Permits
    Division that provides for:

- (a). characterization of the nature and extent of the release by installing and sampling additional monitoring wells as necessary;
- (b). installation of at least one additional monitoring well at the facility boundary in the direction of the contaminant migration and sampling of this well in accordance with Clause E.4.c.ii of this Section; and
- (c). a schedule for implementing the plan;
- ii. notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off site as indicated by the sampling of the wells in accordance with Clause E.4.f.i of this Section; and
- iii. upon consultation with and approval of the administrative authority, implement any interim measures necessary to ensure the protection of human health and the environment. Interim measures should, to the greatest extent practicable, be in accordance with LAC 33:I.Chapter 13 and be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to Paragraph E.6 of this Section. The following factors must be considered by a permit holder in determining whether interim measures are necessary:
  - (a). time required to develop and implement a final remedy;
  - (b). actual or potential exposure of nearby populations or environmental receptors to hazardous parameters or constituents;
  - (c). actual or potential contamination of drinking water supplies or sensitive ecosystems;
  - (d). further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;
  - (e). weather conditions that may cause hazardous parameters or constituents to migrate or be released;
  - (f). risk of fire or explosion, or potential for exposure to hazardous parameters or constituents as a result of an accident or failure of a container or handling system; and
  - (g). other situations that may pose threats to human health and the environment;
- iv. initiate an assessment of corrective measures as required by Paragraph E.5 of this Section; or

- v. may submit a report to the Office of Environmental Assessment,
  Environmental Technology Division demonstrating that a source other than
  the facility being sampled caused the contamination, or the statistically
  significant increase resulted from error in sampling, analysis, statistical
  evaluation, or natural variation in groundwater quality. If the administrative
  authority approves this demonstration in writing, the permit holder must
  continue assessment monitoring at the facility in accordance with Paragraph
  E.4 of this Section, or may return to detection monitoring if the LAC
  33:VII.3005.Table 2 parameters or constituents are below background as
  specified in Subparagraph E.4.d of this Section. Until such a written approval
  is given, the permit holder must comply with Subparagraph E.4.f of this
  Section, including initiating an assessment of corrective action measures.
- g. The permit holder must establish a groundwater protection standard for each LAC 33:VII.3005.Table 2 parameter or constituent detected in the groundwater. The groundwater protection standard shall be in accordance with LAC 33:I.Chapter 13 and shall be:
  - for parameters or constituents for which a maximum contaminant level (MCL) has been promulgated under the federal Safe Drinking Water Act, (the MCL for that parameter or constituent);
  - ii. for parameters or constituents for which the state of Louisiana has promulgated a MCL, the MCL for that parameter or constituent;
  - iii. for parameters or constituents for which MCLs have not been promulgated, the background concentration for the parameter or constituent established from wells in accordance with Paragraph E.4 of this Section, or the administrative authority may allow the standard to be set in accordance with LAC 33:I.Chapter 13 on a case-by-case basis;
  - iv. for Type I facilities, the administrative authority may allow the standard for all parameters or constituents to be set in accordance with LAC 33:I.Chapter 13 on a case-by-case basis;
  - v. for parameters or constituents for which the background level is higher than the MCL identified under Clause E.4.g.i or ii of this Section, the background concentration for the parameter or constituent established from wells in accordance with Paragraph E.4 of this Section; or
  - vi. the administrative authority may establish a more stringent groundwater protection standard if necessary to protect human health or the environment.

The Storm Water Treatment System is a Type I facility, not a Type II landfill or a Type II surface impoundment. Consequently, this section is not applicable.

- Assessment of Corrective Measures at Type II Landfills and Associated Surface Impoundments
  - a. Within 90 days of finding that any of the parameters or constituents listed in LAC 33:VII.3005. Table 2 have been detected at a statistically significant level exceeding the groundwater protection standards defined under Subparagraph E.4.g of this Section, the permit holder must initiate an assessment of corrective measures.
  - b. The permit holder must continue to monitor in accordance with the assessment monitoring program throughout the period of corrective action, as specified in Paragraph E.4 of this Section.
  - c. The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives of the remedy as described under Paragraph E.6 of this Section addressing at least the following:
    - i. performance, reliability, ease of implementation, and potential impacts of appropriate potential remedies, including safety impacts, cross-media impacts, and control of exposure to any residual contamination;
    - time required to begin and complete the remedy;
    - iii. costs of remedy implementation; and
    - iv. institutional requirements such as state or local permit requirements or other environmental or public health requirements that may substantially affect implementation of the remedy.
  - d. The results of the corrective measures assessment must be discussed by the permit holder, in a public meeting prior to the selection of remedy, with interested and affected parties.

The Storm Water Treatment System is a Type I facility, not a Type II landfill or associated surface impoundment. Consequently, this section is not applicable.

- Selection of Remedy and Corrective Action Plan at Type II Landfills and Associated Surface Impoundments.
  - a. Based on the results of the corrective measures assessment conducted under Paragraph E.5 of this Section, the permit holder must select a remedy that, at a minimum, meets the standards of Subparagraph E.6.b of this Section. Within 180 days after initiation of the corrective measures assessment required in Paragraph E.5 of this Section, the permit holder must submit four bound copies (8 1/2 by 11 inches) of a corrective-action plan to the Office of Environmental

Assessment, Environmental Technology Division, describing the selected remedy, which will meet the requirements of Subparagraphs E.6.b-d of this Section and be in accordance with LAC 33:I.Chapter 13. The corrective-action plan must also provide for a corrective-action groundwater monitoring program as described in Clause E.7.a.i of this Section.

#### b. Remedies must:

- i. be protective of human health and the environment;
- attain the groundwater protection standard as specified pursuant to Subparagraph E.4.g of this Section;
- iii. control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of LAC 33:VII.3005. Table 2 parameters or constituents into the environment that may pose a threat to human health or the environment; and
- iv. comply with standards for management of wastes as specified in Subparagraph E.7.g of this Section.
- c. In selecting a remedy that meets the standards of Subparagraph E.6.b of this Section, the permit holder shall consider the following evaluation factors:
  - i. long- and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:
    - (a). magnitude of reduction of existing risks;
    - (b). magnitude of residual risks in terms of likelihood of further releases due to waste remaining following implementation of a remedy;
    - (c). type and degree of long-term management required, including monitoring, operation, and maintenance;
    - (d). short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal of containment;
    - (e). time until full protection is achieved;
    - (f). potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and

the environment associated with excavation, transportation, redisposal, or containment;

- (g). long-term reliability of the engineering and institutional controls; and
- (h). potential need for replacement of the remedy;
- ii. effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:
  - (a). extent to which containment practices will reduce further releases;
  - (b). extent to which treatment technologies may be used;
- iii. ease or difficulty of implementing a potential remedy(s) based on consideration of the following types of factors:
  - (a). degree of difficulty associated with constructing the technology;
  - (b). expected operational reliability of the technologies;
  - (c). need to coordinate with and obtain necessary approvals and permits from other agencies;
  - (d). availability of necessary equipment and specialists; and
  - (e). available capacity and location of needed treatment, storage, and disposal services;
- iv. practicable capability of the permit holder, including a consideration of the technical and economic capability; and
- v. degree to which community concerns are addressed by a potential remedy(s).
- d. The permit holder shall specify as part of the selected remedy a schedule(s) for initiating and completing remedial activities. Such a schedule must require the initiation of remedial activities within a reasonable period of time. The permit holder must consider the following factors in determining the schedule of remedial activities:

- i. extent and nature of contamination;
- practical capabilities of remedial technologies in achieving compliance with groundwater protection standards established under Subparagraph E.4.g of this Section and other objectives of the remedy;
- iii. availability of treatment or disposal capacity for wastes managed during implementation of the remedy;
- iv. desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;
- v. potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;
- vi. resource value of the aquifer including:
  - (a), current and future uses;
  - (b). proximity and withdrawal rate of users;
  - (c). groundwater quantity and quality;
  - (d). potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to parameters or constituents;
  - (e). hydrogeologic characteristic of the facility and surrounding land;
  - (f). groundwater removal and treatment costs; and
  - (g). cost and availability of alternative water supplies;
- vii. practicable capability of the permit holder; and
- viii.other relevant factors.
- e. The administrative authority may determine that remediation of a release of an LAC 33:VII.3005. Table 2 parameter or constituent from a facility is not necessary if the permit holder demonstrates to the satisfaction of the administrative authority that:
  - i. the groundwater is additionally contaminated by substances that have originated from a source other than a facility and those substances are present

in such concentrations that cleanup of the release from the facility would provide no significant reduction in risk to actual or potential receptors; or

- ii. parameter or constituent is present in groundwater that:
  - (a). is not currently or reasonably expected to be a source of drinking water;
  - (b). is not hydraulically connected with waters to which the parameters or constituents are migrating or are likely to migrate in a concentration that would exceed the groundwater protection standards established under Subparagraph E.4.g of this Section; or
- iii. remediation of the release(s) is technically impracticable; or
- iv. remediation results in unacceptable cross-media impacts.
- f. A determination by the administrative authority pursuant to Subparagraph E.6.e of this Section shall not affect the authority of the administrative authority to require the permit holder to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the groundwater, to prevent exposure to the groundwater, or to remediate the groundwater to concentrations that are technically practicable and that significantly reduce threats to human health or the environment.

The Storm Water Treatment System is a Type I facility, not a Type II landfill or associated surface impoundment. Consequently, this section is not applicable.

- 7. Implementation of the Corrective Action Programs at Type II Landfills and Associated Type II Surface Impoundments
  - a. After the corrective action plan has been approved by the administrative authority and, based on the corrective action plan schedule established under Subparagraph E.6.d of this Section for initiation and completion of remedial activities, the permit holder must:
    - i. implement a corrective-action groundwater monitoring program as described in the approved corrective-action plan that:
      - (a). at a minimum, meets the requirements of an assessment monitoring program under Paragraph E.4 of this Section;
      - (b). indicates the effectiveness of the corrective action remedy; and
      - (c). demonstrates compliance with the groundwater protection standard pursuant to Subparagraph E.4.g of this Section;

- ii. implement the corrective-action plan established under Paragraph E.6 of this Section.
- b. A permit holder may submit a report to the Office of Environmental Assessment, Environmental Technology Division demonstrating, based on information developed after implementation of the corrective action plan has begun or other information, that compliance with requirements of Subparagraph E.6.b of this Section are not being achieved through the remedy selected. A revised correctiveaction plan providing other methods or techniques that could practically achieve compliance with the requirements of Subparagraph E.6.b of this Section must accompany the demonstration.
- c. If the administrative authority approves, in writing, the demonstration and revised corrective action plan submitted pursuant to Subparagraph E.7.b of this Section, the permit holder must implement the revised corrective-action plan.
- d. The permit holder may submit a report to the Office of Environmental Assessment, Environmental Technology Division demonstrating that compliance with the requirements under Subparagraph E.6.b of this Section cannot be achieved with any currently available methods.
- e. If the administrative authority approves, in writing, the demonstration submitted pursuant to Subparagraph E.7.d of this Section, the permit holder must, within 30 days of the approval, submit a plan to the Office of Environmental Assessment, Environmental Technology Division (which includes an implementation schedule) to implement alternate measures in accordance with LAC 33:I.Chapter 13:
  - i. to control exposure of humans and the environment to residual contamination as necessary to protect human health and the environment; and
  - ii. for the control of the sources of contamination, or for the removal or decontamination of equipment, devices, or structures, that are technically practicable and consistent with the overall objective of the remedy.
- f. If the administrative authority approves the plan for alternate measures submitted pursuant to Subparagraph E.7.e of this Section, the permit holder must implement the plan.
- g. All solid wastes that are managed pursuant to a remedy required under Paragraph E.6 of this Section, or an interim measure required under Clause E.4.f.iii of this Section, shall be managed in a manner:
  - i. that is protective of human health and the environment; and
  - ii. that complies with applicable RCRA requirements.

- h. Remedies selected pursuant to Paragraph E.6 of this Section shall be considered complete when:
  - i. the permit holder complies with the groundwater protection standards established under Subparagraph E.4.g of this Section at all points within the plume of contamination that lie beyond the groundwater monitoring well system established under Paragraph E.1 of this Section; and
  - ii. compliance with the groundwater protection standards established under Subparagraph E.4.g of this Section has been achieved by demonstrating that concentrations of LAC 33:VII.3005. Table 2 parameters or constituents have not exceeded the groundwater protection standard(s) for a period of three consecutive years using the statistical procedures and performance standards in Subparagraph E.2.e of this Section. The administrative authority may specify an alternative length of time during which the permit holder must demonstrate that concentrations of LAC 33:VII.3005. Table 2 parameters or constituents have not exceeded the groundwater protection standard(s) taking into consideration:
    - (a), extent and concentration of the release(s);
    - (b). behavior characteristics of the hazardous parameters or constituents in the groundwater;
    - (c). accuracy of monitoring or modeling techniques, including any seasonal, meteorological, or other environmental variabilities that may affect the accuracy; and
    - (d). characteristics of the groundwater;
  - iii. all actions required to complete the remedy have been satisfied.
    - (a). Upon completion of the remedy, the permit holder must submit to the administrative authority within 14 days a certification that the remedy has been completed in compliance with the requirements of Subparagraph E.7.h of this Section. The certification must be signed by the permit holder and approved by the administrative authority.
    - (b). When, upon completion of the certification, the administrative authority determines that the corrective action remedy has been completed in accordance with the requirements under Subparagraph E.7.h of this Section, the permit holder shall be released from the requirements for financial assurance for corrective action under LAC 33:VII.727.B.

The Storm Water Treatment System is a Type I facility, not a Type II landfill or a Type II surface impoundment. Consequently, this section is not applicable.

- 8. Assessment Monitoring Program for Solid Waste Disposal Facilities Other than Type II Landfills and Associated Type II Surface Impoundments.
  - a. An assessment monitoring program as described in Paragraph E.8 of this Section is required to be conducted at solid waste disposal facilities other than Type II landfills and associated Type II surface impoundments whenever a statistically significant increase over background concentrations is detected for one or more of the parameters or constituents sampled and analyzed during the detection monitoring program. The assessment monitoring parameters or constituents shall consist of the detection monitoring parameters or constituents, although the administrative authority may add additional parameters or constituents on a site-specific and waste-specific basis.
  - b. Within 90 days after triggering an assessment monitoring program, the permit holder must sample and analyze the groundwater at all wells for all the assessment monitoring parameters or constituents.
  - c. If assessment monitoring parameters or constituents are detected at concentrations significantly different from background in the resampling event in Subparagraph E.4.b of this Section, the permit holder must, within 14 days of the determination, submit a report to the Office of Environmental Assessment, Environmental Technology Division identifying the assessment monitoring parameters or constituents which are statistically different from background concentrations. The permit holder must also:
    - i. within 90 days after the determination is made, submit four bound copies (8 1/2 by 11 inches) of an assessment plan to the Office of Environmental Assessment, Environmental Technology Division, as well as any necessary permit modification, to the Office of Environmental Services, Permits Division that provides for:
      - (a). characterization of the nature and extent of the release by installing and sampling additional monitoring wells as necessary;
      - (b). installation of at least one additional monitoring well in the direction of the contaminant migration and sampling of this well in accordance with Subclause E.8.c.i.(c) of this Section;
      - (c). sampling, analysis, and reporting of results of all wells for all assessment monitoring parameters or constituents at least once every 90 days; and

- (d). a schedule for implementing the plan;
- ii. notify all persons who own the land or reside on the land that directly overlies any part of the plume of contamination if contaminants have migrated off site as indicated by the sampling of the wells in accordance with Clause E.8.c.i of this Section;
- iii. upon consultation with and approval of the administrative authority, must implement any interim measures necessary to ensure the protection of human health and the environment. Interim measures should be in accordance with LAC 33:I.Chapter 13 and, to the greatest extent practicable, be consistent with the objectives of and contribute to the performance of any remedy that may be required pursuant to Paragraph E.6 of this Section. The following factors must be considered by a permit holder in determining whether interim measures are necessary:
  - (a). time required to develop and implement a final remedy;
  - (b). actual or potential exposure of nearby populations or environmental receptors to hazardous parameters or constituents;
  - (c). actual or potential contamination of drinking water supplies or sensitive ecosystems;
  - (d). further degradation of the groundwater that may occur if remedial action is not initiated expeditiously;
  - (e). weather conditions that may cause hazardous parameters or constituents to migrate or be released;
  - (f). risk of fire or explosion, or potential for exposure to hazardous parameters or constituents as a result of an accident or failure of a container or handling system; and
  - (g). other situations that may pose threats to human health and the environment.

Chevron will comply with the standards provided in Section 709.E.8 if a statistically significant difference in groundwater quality is detected.

- 9. Corrective Action for Solid Waste Disposal Facilities Other than Type II Landfills and Associated Type II Surface Impoundments
  - a. Corrective action at solid waste disposal facilities other than Type II landfills and associated Type II surface impoundments must be performed in accordance with Paragraph E.9 of this Section and LAC 33:I.Chapter 13.

- b. Within 270 days after the submission of the assessment plan, the permit holder must submit four bound copies (8 1/2 by 11 inches) of a corrective-action plan to remediate the groundwater to the Office of Environmental Assessment, Environmental Technology Division, describing the selected remedy, which shall also include:
  - a corrective-action groundwater monitoring program which, at a minimum, meets the requirements of an assessment monitoring program under Paragraph E.8 of this Section, and which indicates the effectiveness of the corrective action remedy;
  - ii. a schedule for initiating and completing remedial activities.
- c. After the corrective-action plan has been approved by the administrative authority and based on the schedule established in Clause E.9.b.ii of this Section, the permit holder must implement a corrective-action program to remediate the groundwater.
- d. Upon completion of the remedy, the permit holder must submit to the administrative authority within 14 days a certification that the remedy has been completed in compliance with the requirements of Subparagraph E.7.h of this Section. The certification must be signed by the permit holder and approved by the administrative authority.

Chevron will comply with the corrective action requirements of Section 709.E.9 if warranted.

10. Applicability to Type II Landfills and Associated Surface Impoundments which are also Type I Landfills and Surface Impoundments. Assessment monitoring, assessment of corrective measures, selection of remedies and corrective action plans, and implementation of corrective action plans at landfills and their associated surface impoundments which are both Type I and Type II (i.e., receive both nonindustrial and industrial solid wastes) are governed by Paragraphs E.4-7 of this Section. These facilities are not governed by Paragraphs E.8 and 9 of this Section, which govern all other solid waste disposal facilities. All solid waste disposal facilities are governed by Paragraphs E.1-3 of this Section.

The Storm Water Treatment System is a Type I facility, not a Type II landfill or a Type II surface impoundment. Consequently, this section is not applicable.

#### §713. Standards Governing Surface Impoundments (Type I and II)

#### A. Facility Surface Hydrology

1. Facilities located in the 100-year flood plain must be filled to bring site elevation above flood levels or perimeter levees or other measures must be provided to maintain adequate protection against the 100-year flood elevation.

As indicated on the FEMA Flood Zone Map presented as Figure 3, the Storm Water Treatment System is not located within a 100-year floodplain.

2. Facilities located in or within 1,000 feet of an aquifer recharge zone shall be designed to protect the areas from adverse impacts of operations at the facility.

The Storm Water Treatment System is not located in or within 1,000 feet of an aquifer recharge zone.

3. Surface-runoff-diversion levees, canals, or devices shall be installed to prevent drainage from the units of the facility which have not received final cover to adjoining areas during a 24-hour/25-year storm event. When rainfall records are not available, the design standard shall be 12 inches of rainfall below 31 degrees north latitude and 9 inches of rainfall above 31 degrees north latitude. If the 24-hour/25-year storm-event level is lower, the design standard shall be required. Adequate freeboard shall be provided to prevent over-topping by wave action.

Chevron does not have to comply with the requirements of Sections 713.A.3, 4, and 5. Please refer to the response to Section 713.A.6.

4. Facilities located in the 100-year floodplain shall not restrict the flow of the 100-year flood or significantly reduce the temporary water-storage capacity of the floodplain, and the design should ensure that the flooding does not affect the integrity of the facility or result in the washout of solid waste so as to pose a threat to human health and the environment.

Chevron does not have to comply with the requirements of Sections 713.A.3, 4, and 5. Please refer to the response to Section 713.A.6.

5. Surface run-on from outside the facility shall be diverted and prevented from entering the facility, with provisions for maintaining adequate freeboard above the requirements of Paragraph A.1. of this Section. A run-on control system shall be installed to prevent run-on during the peak discharge from a 25-year storm event.

Chevron does not have to comply with the requirements of Sections 713.A.3, 4, and 5. Please refer to the response to Section 713.A.6.

6. Existing surface impoundments, including existing ditches which receive solid waste, which are designed to collect or transport run-on (e.g., stormwater) are not required to comply with any of the requirements of LAC 33:VII.713.A.3, 4, and 5. This Subsection does not relieve such facilities from compliance with the Louisiana Water Quality regulations (LAC 33:Part IX).

The Storm Water Treatment System does collect and transport run-on. Consequently, Chevron does not have to comply with the requirements of LAC 33:VII.713.A.3, 4, and 5.

#### B. Facility Plans and Specifications

1. Plans, specifications, and operations represented and described in the permit application or permit modifications for all facilities must be prepared under the supervision of and certified by a registered engineer, licensed in the state of Louisiana.

The plans, specifications, and operations represented and described in the permit application for the existing Storm Water Impoundment Basin, with the exception of the new pump station, were designed by Waldemar S. Nelson Company of New Orleans, Louisiana, and built in 1973. Waldemar S. Nelson Company, a registered local Architects and Engineers consulting firm, has been in existence since 1945. The Storm Water Impoundment Basin was initially permitted on July 28, 1986. The facility has been permitted since 1986.

The new pump station was designed by Mr. Justin Bottger, a professional engineer licensed in the state of Louisiana.

#### 2. Levee Construction

a. Levees or other protective measures must be provided in order to protect the facility against the 100-year flood so as to prevent the washout of solid waste.

The Storm Water Treatment System is located outside the 100-year floodplain, as depicted on Figure 3. However, the plant boundary is surrounded by a dike and levee system which will protect the facility against the 100-year flood and prevent washout of the solid waste.

b. If levees are required to protect the facility against the 100-year flood, such perimeter levees shall be engineered to minimize wind and water erosion and shall have a grass cover or other protective cover to preserve structural integrity and shall provide adequate freeboard above the 100-year flood elevation.

The Storm Water Treatment System is located outside the 100-year floodplain, as depicted on Figure 3. Hence, this section is not applicable.

3. Liners

- a. The standards in Paragraph B.3 of this Section apply to liners for Type I and II proposed surface impoundments and for surface impoundments constructed subsequent to the required upgrade date specified in LAC 33:VII.315.G. (Units of surface impoundments on which construction is completed prior to the upgrade date specified in LAC 33:VII.315.G and which have received a temporary permit or standard permit prior to February 1, 1993, are not governed by these liner standards.)
- b. The permit holder or applicant must provide and implement a quality-control and quality-assurance plan for liner construction and maintenance that will ensure that liners are designed, constructed, installed, and maintained properly. All facilities must have quality-control plans for the excavations. All excavations and liners shall be inspected and certified by a registered engineer, licensed in the state of Louisiana, with the appropriate expertise.
- c. The permit holder or applicant must demonstrate that the liner is placed upon a base that provides the following:
  - adequate support for the contents;
  - maximum resistance to settlement of a magnitude sufficient to affect the integrity of the liner or the proper positioning of the leachate-collection or leak-detection system;
  - iii. maximum resistance to hydrostatic heave on the sides or bottom of the excavation; and
  - iv. maximum resistance to desiccation.
- d. Units of surface impoundments shall be lined along the sides and bottom with a composite liner consisting of a geomembrane liner at least 30-mil thick installed directly above and in uniform contact with a 3-foot recompacted clay liner having a hydraulic conductivity no greater than 1 x 10-7 cm/sec which has been installed under the supervision of a registered engineer, licensed in the state of Louisiana and with the appropriate expertise. (If the geomembrane component is high-density polyethylene, then the geomembrane component must be at least 60-mil thick. Any geomembrane liner used must be compatible with the solid waste and leachate in the unit.) An alternative liner system which will provide equivalent or greater groundwater protection at the site as compared to the composite liner, as demonstrated by generally accepted modeling techniques and based on factors specific to the site and to the solid wastes received, may be used. The burden of proof of adequacy of the alternate liner design shall be on the permit holder or applicant.

- e. Secondary liners may be constructed below and in addition to the required composite liner. The specifications of secondary liners must be approved by the administrative authority on an individual basis.
- f. A leak-detection system may be constructed between the required composite liner and any secondary liner. The specifications of the leak-detection system must be approved by the administrative authority on an individual basis.
- g. Special design conditions may be required in areas where the groundwater table is high or where other circumstances warrant such conditions as determined by the administrative authority. These special design standards may include more protective or stringent standards such as secondary liners (described in Subparagraph B.3.e of this Section) or leak-detection systems, or other conditions.

Construction of the Storm Water Treatment System was completed prior to the upgrade date specified in LAC 33:VII.315.G and a standard permit was received prior to February 1, 1993. Consequently, this system is not governed by these liner standards.

- 4. Gas Collection and Treatment or Removal System. The following standards apply to Type I and II surface impoundments not performing clean closure.
  - Each unit of the facility with a potential for methane gas production and migration shall be provided with a methane gas collection and treatment or removal system.
  - The collection system shall be vented to the atmosphere or connected to a dispersal system or resource recovery system in accordance with accepted practices.
  - c. The gas collection and treatment or removal system shall be such that it limits methane gas to lower-explosive limits at the facility boundary and to 25 percent of the lower-explosive limits in facility buildings.
  - d. Sampling protocol, chain of custody, and test methods shall be established for all gas collection and treatment or removal systems.

The solid waste disposed of in the Storm Water Treatment System does not generate gases; hence, this section is not applicable.

#### C. Facility Administrative Procedures

- 1. Recordkeeping and Reports
  - a. Reports

- i. The permit holder shall submit annual reports to the Office of Management and Finance, Financial Services Division indicating quantities and types of solid waste (expressed in wet-weight tons per year), received from in-state generators and from out-of-state generators, during the reporting period. If applicable, the annual report shall also indicate the estimated remaining permitted capacity at the facility as of the end of the reporting period (expressed in wet-weight tons). All calculations used to determine the amounts of solid waste received for disposal and to determine remaining capacity during the annual-reporting period shall be submitted to the administrative authority. A form to be used for this purpose must be obtained from the Office of Management and Finance, Financial Services Division or through the department's website.
- ii. The reporting period for the processor and/or disposer annual report shall be from July I through June 30, commencing July 1, 1992, and terminating upon closure of the facility in accordance with the permit.
- iii. Annual reports shall be submitted to the administrative authority by August I of each reporting year.
- iv. The annual report is to be provided for each individual permitted facility on a separate annual-reporting form.
- v. A facility which receives industrial solid waste shall utilize, in its annual report, the seven-digit industrial waste number that has been assigned by the administrative authority to the industrial solid waste generator.

Chevron will submit an annual report to LDEQ indicating the estimated remaining permitted capacity at the facility as of the end of the reporting period (expressed in wetweight tons) for the period of July 1 through June 30 of a given year. All calculations used to determine the amounts of solid waste received for disposal and to determine remaining capacity during the annual reporting period will be submitted to LDEQ. Chevron will submit the annual report no later than August 1 of a given year. The seven-digit industrial waste number assigned by LDEQ will be used in the annual report. Reporting requirements will terminate upon closure of the facility.

#### b. Recordkeeping

- i. The permit holder shall maintain at the facility all records specified in the application as necessary for the effective management of the facility and for preparing the required reports. These records shall be maintained for the life of the facility and shall be kept on file for at least three years after closure.
- ii. The permit holder shall maintain records of transporters transporting waste for processing or disposal at the facility. The records shall include the date of

receipt of shipments of waste and the transporter's solid waste identification number issued by the administrative authority.

- iii. Records kept on site for all facilities shall include, but not be limited to:
  - (a), copies of the current Louisiana solid waste rules and regulations;
  - (b). the permit;
  - (c). the permit application;
  - (d). permit modifications;
  - (e). certified field notes for construction;
  - (f). operator training programs;
  - (g). daily log;
  - (h). quality-assurance/quality-control records;
  - (i). inspections by the permit holder or operator;
  - (j). Board of Certification and Training for Solid Waste Disposal System Operator Certificates (if applicable);
  - (k). records demonstrating that liners and leak-detection and cover systems are constructed or installed in accordance with appropriate assurance procedures;
  - (1). monitoring, testing, or analytical data;
  - (m). any other applicable or required data deemed necessary by the administrative authority;
  - (n). records on groundwater sampling results;
  - (o). post-closure monitoring reports; and
  - (p). copies of all documents received from or submitted to the department.

Chevron will maintain at the facility all records specified in Section 713.C.1.b.iii above as necessary for the effective management of the facility and for preparing the required reports. These records will be maintained for the life of the facility and shall be kept on file for at least 3 years after closure.

#### 2. Personnel

a. Facilities shall have the personnel necessary to achieve the operational requirements of the facility.

The Storm Water Treatment System is operated by Chevron personnel or their contractors under the direct supervision of Chevron. The minimum number of personnel required to operate the Solid Waste facility is included in Appendix R. The Oak Point Plant has the personnel necessary to fulfill the personnel requirements of the Storm Water Treatment System.

b. Facilities receiving residential and commercial solid waste shall have the numbers and levels of certified operators employed at the facility, as required by the Louisiana Administrative Code, Title 46, Part XXIII. Operator certificates shall be prominently displayed at the facility. The Board of Certification and Training for Solid Waste Disposal System Operators and the Office of Environmental Services, Permits Division shall be notified within 30 days of any changes in the employment status of certified operators.

The Storm Water Treatment System does not receive residential and/or commercial solid waste; consequently, this section is not applicable.

#### D. Facility Operations

- 1. Facility Limitations
  - a. The receipt of hazardous waste shall be strictly prohibited and prevented. Any other wastes that present special handling or disposal problems may be excluded by the administrative authority.

The receipt of hazardous waste at the Storm Water Treatment System is strictly prohibited and prevented. In addition, Chevron acknowledges that any other wastes that present special handling or disposal problems may be excluded by LDEQ.

b. Open burning shall not be practiced unless authorization is first obtained from the administrative authority and any other applicable federal, state, and local authorities.

Open burning of solid waste is not employed at the Storm Water Treatment System. Consequently, this section is not applicable.

c. Salvaging shall be prevented unless approved by the administrative authority.

Not applicable. The waste disposed of in the Storm Water Treatment System is not salvageable.

d. Scavenging shall be prevented.

# Scavenging is not allowed at the facility. The perimeter fence and plant-wide security adequately prevent scavenging attempts.

- e. The following limitations apply to Type I surface impoundments.
  - i. Industrial solid waste and nonhazardous petroleum-contaminated media and debris generated by underground storage tanks (UST) corrective action may be processed or disposed of only in Type I facilities. A comprehensive quality-assurance/quality-control plan shall be in place before the receipt of these wastes.
  - Incinerator ash may be disposed of only in a Type I facility. A
    comprehensive quality-assurance/quality-control program shall be in place
    before the receipt of this waste.

#### The Oak Point Plant does not receive these wastes; hence, this section is not applicable.

- 2. Facility Operational Plans. Operational plans shall be provided which describe in specific detail how the waste will be managed during all phases of disposal operations. At a minimum, the plan shall address:
  - a. the route the waste will follow after receipt;
  - b. the sequence in which the waste will be processed or disposed of within a unit;
  - the method and operational changes that will be used during wet weather (particular attention should be given to maintenance of access roads and to water management);
  - d. the recordkeeping procedures to be employed to ensure that all pertinent activities are properly documented;
  - e. the sampling protocol, chain of custody, and test methods that will be used in the gas-monitoring systems;
  - f. the engineering protocols and testing frequencies that will be used to ensure that the grade and slope of both the on-site drainage system and the run-on diversion system are maintained and serve their intended functions;
  - g. the engineering protocols and testing frequencies that will be used to ensure that the designed capacity of the impoundment remains unchanged; and
  - h. the methods and inspection frequencies that will be used to establish that the levees and required freeboards are maintained.

A Facility Operational Plan for the Storm Water Treatment System is provided in Section 521.H, which describes in specific detail how the waste is managed during all phases of disposal operations. At a minimum, the plan addresses the items listed in Section 713.D.2 above.

- 3. Facility Operational Standards
  - a. Air-Monitoring Standards
    - Facilities receiving waste with a potential to produce methane gas shall be subject to the air-monitoring requirements.

The solid waste disposed of at the Storm Water Treatment System does not generate methane gases which would need to be monitored for this regulation. Hence, this section is not applicable.

- ii. The permit holder or applicant subject to air-monitoring requirements shall submit to the Office of Environmental Services, Permits Division a comprehensive air-monitoring plan that will limit methane gas levels to less than the lower-explosive limits at the facility boundary and to 25 percent of the lower-explosive limits in facility buildings.
  - (a). The type and frequency of monitoring must be determined based on the following factors:
    - (i). soil conditions;
    - (ii). hydrogeologic conditions surrounding the facility;
    - (iii). hydraulic conditions surrounding the facility; and
    - (iv). the location of the facility structures and property boundaries.
  - (b). The minimum frequency of monitoring shall be quarterly.

The Storm Water Treatment System is not subject to air monitoring requirements. Please refer to the response to Section 713.D.3.a.i.

- iii. If methane gas levels exceeding the limits specified in Clause D.3.a.ii of this Section are detected, the owner or operator must:
  - (a). immediately take all necessary steps to ensure protection of human health and notify the Office of Environmental Compliance in the manner provided in LAC 33:I.3923;

(b). within 30 days of detection, submit a remediation plan for the methane gas releases to the Office of Environmental Assessment, Environmental Technology Division. The plan shall describe the nature and extent of the problem and the proposed remedy, and shall include an implementation schedule. The plan must be implemented within 60 days of detection.

#### Please refer to the response to Section 713.D.3.a.i.

iv. The permit holder shall make prompt notification to the Office of Environmental Compliance in accordance with LAC 33:I.3923 when strong odors occur at facility boundaries or when methane gas levels exceed the limit specified in Clause D.3.a.ii of this Section.

Chevron will notify LDEQ if strong odors occur at the Storm Water Treatment System boundaries. Methane gas is not associated with the wastes managed at the site.

v. Records of inspections, surveys, and gas monitoring results shall be maintained at the facility.

Records of inspections and surveys will be maintained at the facility.

vi. Odors shall be controlled by the best means practicable.

Not applicable. The solid waste generated at the plant is nonputrescible.

vii. Facilities must ensure that the units not violate any applicable requirements developed under a state implementation plan (SIP) approved or promulgated pursuant to Section 110 of the Clean Air Act, as amended.

Chevron will ensure that the Storm Water Treatment System does not violate any applicable requirements developed under a SIP approved or promulgated pursuant to Section 110 of the Clean Air Act, as amended.

b. Surface impoundments shall be designed, constructed, maintained, and operated to prevent overtopping by overfilling, wave action, or action of storms.

The Surface Impoundment Basin of the Storm Water Treatment System will be maintained and operated to prevent overtopping by overfilling, wave action, or action of storms.

c. Surface impoundments shall be inspected daily and after storms to detect evidence of deterioration of the dikes and levees, overtopping, malfunctions, or improper operation. Excessive vegetative growth that prevents proper access, inspection, or operation, or may provide a conduit for groundwater contamination shall be removed. The Surface Impoundment Basin of the Storm Water Treatment System will be inspected daily and after storms to detect evidence of deterioration of the dikes and levees, overtopping, malfunctions, or improper operation. Excessive vegetative growth that prevents proper access, inspection, or operation, or may provide a conduit for groundwater contamination will be removed.

d. If a leak in an impoundment is found, the administrative authority shall be notified in accordance with LAC 33:I.Chapter 39.

If a leak in the Storm Water Treatment System's Surface Impoundment Basin is found, LDEQ will be notified in accordance with LAC 33:I.Chapter 39.

- e. Waste Testing. The following operational standards apply to waste testing for facilities receiving domestic sewage sludge, industrial solid waste, incinerator ash, or nonhazardous petroleum-contaminated media and debris generated by underground storage tanks (UST) corrective action.
  - i. Facilities which receive domestic septage or sewage sludge from publicly owned treatment works shall require the waste be tested for toxicity characteristics leachate procedure (TCLP) analysis and priority pollutants prior to acceptance of the waste and annually for two years following acceptance. Each year thereafter, the generator must certify that the waste remains unchanged.

The Storm Water Treatment System does not receive domestic septage or sewage sludge from publicly owned treatment works; hence, this section is not applicable.

ii. Facilities which receive industrial waste (Type I) shall require testing for TCLP constituents prior to acceptance of the waste and annually thereafter, or documented process knowledge which confirms that the waste is not a characteristic or listed hazardous waste as defined in LAC 33:V.Subpart 1, or by federal regulations. Nonhazardous petroleum-contaminated media and debris generated from underground storage tanks (UST) corrective action will require testing for the appropriate constituents of TCLP prior to acceptance of the waste.

Solids and fluids from the Storm Water Treatment System were sampled and analyzed for TCLP constituents. The results of the analyses are provided in Appendix S and indicate that the material is nonhazardous. Chevron uses its knowledge of the manufacturing process to confirm that the waste is nonhazardous on an annual basis.

Nonhazardous petroleum contaminated media and debris generated from UST corrective action is not disposed in the Storm Water Treatment System at the Chevron Oak Point Plant.

iii. Type I facilities which receive incinerator ash shall require testing of the ash for TCLP metals and dioxins prior to acceptance and thereafter quarterly for TCLP metals and annually for dioxins.

The Storm Water Treatment System does not dispose of incinerator ash; therefore, this section is not applicable.

4. Sufficient equipment shall be provided and maintained at all facilities to meet the facilities' operational needs.

A schematic showing the minimum equipment to be furnished at the facility is provided on Figure 13. The schematic indicates that oil/water separators, activated sludge biological treatment, aeration basins, polishing filters, etc., are required for operation of the facility.

- 5. Facility Operations, Emergency Procedures, and Contingency Plans
  - a. A plan outlining facility operations and emergency procedures to be followed in case of accident, fire, explosion, or other emergencies shall be developed and filed with the Office of Environmental Services, Permits Division and with the local fire department and the closest hospital or clinic. The plans shall be updated annually or when implementation demonstrates that a revision is needed.

In the event that an emergency arises, such as described above, the person discovering the incident shall immediately take measures to contain or control the situation. If the person cannot control the situation, they shall immediately notify their supervisor who will contact plant emergency response personnel. Personnel will follow the procedures described in the Emergency Response Manual. A copy of the emergency procedures employed is presented in Appendix H.

b. Training sessions concerning the procedures outlined in Subparagraph D.5.a of
this Section shall be conducted annually for all employees working at the facility.
A copy of the training program shall be filed with the Office of Environmental
Services, Permits Division.

A Formal Operator Training Program for employees is presented in Appendix T.

#### E. Facility Closure Requirements

- Notification of Intent to Close a Facility. All permit holders shall notify the Office of Environmental Services, Permits Division in writing at least 90 days before closure or intent to close, seal, or abandon any individual units within a facility and shall provide the following information:
  - a. date of planned closure;
  - b. changes, if any, requested in the approved closure plan; and

c. closure schedule and estimated cost.

Chevron will notify LDEQ in writing at least 90 days prior to closure of the Storm Water Treatment System or intention to close any part of the facility. Notification will include the date of the planned closure, any changes requested in the closure plan approved for this permit, closure schedule, closure cost, and a certification that the closure is to be performed in accordance with the plan included in the permit application.

- 2. Preclosure Requirements. The following standards apply to preclosure requirements for surface impoundments with on-site closure.
  - All facilities with a potential for gas production or migration shall provide a gas collection and treatment or removal system.

Clean closure is planned for the Storm Water Treatment System; therefore, this section is not applicable.

b. The runoff-diversion system shall be maintained and modified to prevent overflow of the facility to adjoining areas.

The runoff-diversion system will be maintained and modified to prevent overflow of the Storm Water Treatment System to adjoining areas.

- 3. Closure Requirements
  - Surface liquids and sludges containing free liquids shall be dewatered or removed.

Chevron will comply with the above regulation by removing all waste from the Storm Water Treatment System.

- b. If a clean closure is achieved, there are no further post-closure requirements. The closure plan must reflect a method for determining that all waste has been removed and such a plan shall, at a minimum, include the following:
  - i. identification (waste analysis) of the wastes that have entered the facility;
  - ii. selection of the indicator parameters to be sampled which are intrinsic to the waste that have entered the facility in order to establish clean-closure criteria. Justification of the parameters selected shall be provided in the closure plan;
  - iii. sampling and analyses of the uncontaminated soils in the general area of the facility for a determination of background levels using the indicator parameters selected. A diagram showing the location of the area proposed for the background sampling, along with a description of the sampling and testing methods, shall be provided;

- iv. a discussion of the sampling and analyses of the "clean" soils for the selected parameters after the waste and contaminated soils have been excavated. Documentation regarding the sampling and testing methods (i.e., including a plan view of the facility, sampling locations, and sampling qualityassurance/quality-control programs) shall be provided;
- v. a discussion of a comparison of the sample(s) from the area of the excavated facility to the background sample. Concentrations of the selected parameter(s) of the bottom and side soil samples of the facility must be equal to or less than the background sample to meet clean closure criteria;
- vi. analyses to be sent to the Office of Environmental Services, Permits Division confirming that clean closure has been achieved;
- vii. identification of the facility to be used for the disposal of the excavated waste; and
- viii.a statement from the permit holder indicating that, after the closure requirements have been met, the permit holder will file a request for a closure inspection with the Office of Environmental Services, Permits Division before backfilling takes place. The administrative authority will determine whether the facility has been closed properly.

A clean closure is planned for the Storm Water Treatment System. Therefore, further post-closure requirements will not be required. If clean closure is not achieved, Chevron will comply with the post-closure requirements of LAC 33:VII.713.F.

c. If solid waste remains at the facility, the closure and post-closure requirements for industrial (Type I) solid waste landfills or non-industrial landfill (Type II) shall apply.

Chevron will remove all waste from the Storm Water Treatment System; therefore, this section does not apply.

- 4. If the permit holder demonstrates that removal of most of the solid waste to achieve an alternate level of contaminants based on indicator parameters in the contaminated soil will be adequately protective of human health and the environment (including groundwater) in accordance with LAC 33:I.Chapter 13, the administrative authority may decrease or eliminate the post-closure period.
  - a. If levels of contamination at the time of closure meet residential standards as specified in LAC 33:I.Chapter 13 and approval of the administrative authority is granted, the requirements of Subparagraph E.4.b of this Section shall not apply. The requirements of Subsection F of this Section, "Facility Post-Closure Requirements," shall apply.

b. Excepting those sites closed in accordance with Subparagraph E.4.a of this Section, within 90 days after a closure is completed, the permit holder must have entered in the mortgage and conveyance records of the parish for the property, a notation stating that solid waste remains at the site and providing the indicator levels obtained during closure.

Chevron will remove all waste from the Storm Water Treatment System; therefore, this section does not apply.

 Upon determination by the administrative authority that a facility has completed closure in accordance with an approved plan, the administrative authority shall release the closure fund to the permit holder.

Chevron acknowledges that LDEQ shall release the closure fund to Chevron once a determination has been made by LDEQ that a facility has completed closure in accordance with the approved plan.

#### F. Facility Post-Closure Requirements

- 1. The length of the post-closure care period for surface impoundments may be:
  - a. decreased by the administrative authority if the permit holder demonstrates that the reduced period is sufficient to protect human health and the environment in accordance with LAC 33:I.Chapter 13 and this demonstration is approved by the administrative authority (Any demonstration must provide supporting data, including adequate groundwater monitoring data.); or
  - b. increased by the administrative authority if the administrative authority determines that the lengthened period is necessary to protect human health and the environment in accordance with LAC 33:I.Chapter 13.

Clean closure is anticipated for the Storm Water Treatment System. Therefore, further post-closure requirements will not be required. Consequently, this section does not apply.

- 2. The following standards regarding post-closure requirements apply to surface impoundments with on-site closure.
  - a. Post-Closure Care Length
    - i. Facilities which receive solid waste on or after October 9, 1993, must remain in post-closure care for 30 years after closure of the facility.
    - ii. Existing facilities which do not receive waste on or after October 9, 1993, must remain in post-closure care for three years after closure of the facility.

- iii. However, if the facility received waste on or after October 9, 1991, the final cover must be maintained as specified in Subparagraph F.2.b of this Section for 30 years after closure.
- b. The post-closure care, except as otherwise specified above, must consist of at least the following:
  - maintaining the integrity and effectiveness of the final cover (including making repairs to the cover as necessary to correct the effects of settling, subsidence, erosion, or other events), preventing run-on and runoff from eroding or otherwise damaging the final cover; and providing annual reports to the Office of Environmental Compliance, Surveillance Division on the integrity of the final cap;
  - ii. maintaining and operating, if applicable, the leak-detection system;
  - iii. maintaining and operating the gas collection, and treatment or, removal system and the gas-monitoring system; and
  - iv. maintaining and monitoring the groundwater-monitoring system.

The Storm Water Treatment System will not be an on-site closure; therefore, this section is not applicable.

#### §727. Financial Assurance

#### A. Financial Responsibility During Operation and for Closure and Post-Closure Care

1. Financial Responsibility During Operation. Permit holders or applicants for standard permits of Type I, I-A, II, II-A, and III facilities have the following financial responsibilities while the facility is in operation:

At this time Chevron has chosen the irrevocable standby letter of credit with standby trust fund to comply with the requirements of Section 727; however, in the future we intend to transfer to financial test and corporate guarantee as the mechanism to meet the requirements of Section 727. Financial responsibility documents are provided in Appendix X and are consistent with the format specified in Section 727.A.

a. Permit holders or applicants for Type I and II facilities shall maintain liability insurance, or its equivalent, for sudden and accidental occurrences in the amount of \$1 million per occurrence and \$1 million annual aggregate, per site, exclusive of legal-defense costs, for claims arising from injury to persons or property, owing to the operation of the site. Evidence of this coverage shall be updated annually and provided to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation, and submits the irrevocable standby letter of credit with standby trust fund for the Oak Point Facility to meet the minimum financial requirement of \$1 million per occurrence and \$1 million annual aggregate; however, in the future we intend to transfer to financial test and corporate guarantee as the mechanism to meet the requirements of Section 727. Documents are provided in Appendix X.

b. Permit holders or applicants for Type I-A and II-A facilities shall maintain liability insurance, or its equivalent, for sudden and accidental occurrences in the amount of \$500,000 per occurrence, and \$500,000 annual aggregate, per site, exclusive of legal-defense costs, for claims arising from injury to persons or property, owing to the operation of the site. Evidence of this coverage shall be updated annually and provided to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, the Storm Water Treatment System is a Type I facility. Therefore, the above citation does not apply.

c. Permit holders or applicants for Type III facilities shall maintain liability insurance, or its equivalent, for sudden and accidental occurrences in the amount of \$250,000 per occurrence, and \$250,000 annual aggregate, per site, exclusive of legal-defense costs, for claims arising from injury to persons or property, owing to the operation of the site. Evidence of this coverage shall be updated

annually and provided to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, the Storm Water Treatment System is a Type I facility. Therefore, the above citation does not apply.

- d. The financial responsibility may be established by any one or a combination of the following.
  - i. Evidence of liability insurance may consist of either a signed duplicate original of a solid waste liability endorsement, or a certificate of insurance.
     All liability endorsements and certificates of insurance must include:

Chevron acknowledges the above citation; however, Chevron has elected to employ the irrevocable standby letter of credit with standby trust fund. Therefore, the above citation does not apply.

ii. Letter of Credit. A permit holder or applicant may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the following requirements, and by submitting the letter to the administrative authority.

The irrevocable standby letter of credit with standby trust fund is provided in Appendix X.

(a). The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or state agency.

Deutsche Bank AG, New York Branch has the authority to issue Letters of Credit.

(b). A permit holder or applicant who uses a letter of credit to satisfy the requirements of this Section must also provide to the administrative authority evidence of the establishment of a standby trust fund. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the administrative authority will be deposited by the issuing institution directly into the standby trust fund. The wording of the standby trust fund agreement shall be as specified in Clause A.2.d.ix of this Section.

Chevron acknowledges this requirement. A standby trust fund has been submitted along with the letter of credit (Appendix X). The submitted trust fund meets all of the following requirements.

i. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or state agency.

- ii. Trusts must be accomplished in accordance with and subject to the laws of Louisiana. The beneficiary of the trust shall be the administrative authority.
- iii. Trust-fund earnings may be used to offset required payments into the fund, to pay the fund trustee, or to pay other expenses of the funds, or may be reclaimed by the permit holder or applicant upon approval of the administrative authority.
- iv. The trust agreement must be accompanied by an affidavit certifying the authority of the individual signing the trust on behalf of the permit holder or applicant.
- v. The permit holder or applicant may accelerate payments into the trust fund or deposit the full amount of the current closure cost estimate at the time the fund is established. The permit holder or applicant must, however, maintain the value of the fund at no less than the value that the fund would have if annual payments were made as specified in Clause A.2.b.iv of this Section.
- vi. If the permit holder or applicant establishes a trust fund after having used one or more of the alternate mechanisms specified in this Section, his first payment must be in at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of this Paragraph.
- vii. After the pay-in period is completed, whenever the current cost estimate changes, the permit holder must compare the new estimate with the trustee's most recent annual valuation of the trust fund. If the value of the fund is less than the amount of the new estimate, the permit holder or applicant, within 60 days after the change in the cost estimate, must either deposit an amount into the fund that will make its value at least equal to the amount of the closure/post-closure cost estimate or it must estimate or obtain other financial assurance as specified in this Section to cover the difference.
- viii. After beginning final closure, a permit holder, or any other person authorized by the permit holder to perform closure and/or post-closure may request reimbursement for closure and/or post-closure expenditures by submitting itemized bills to the Office of Management and Finance, Financial Services Division. Within 60 days after receiving bills for such activities, the administrative authority will determine whether the closure and/or post-closure expenditures are in accordance with the closure plan or otherwise justified, and if so, he or she will instruct the trustee to make reimbursement in such amounts as the administrative authority specifies in writing. If the administrative authority has reason to believe that the cost of closure and/or post-closure will be significantly greater than the value of the trust fund, he may withhold reimbursement for such amounts as he deems prudent until he determines that the permit holder is no longer required to maintain financial assurance.

- ix. The wording of the trust agreement shall be identical to the wording that follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted. The trust agreement shall be accompanied by a formal certification of acknowledgement.
  - (c). The letter of credit must be accompanied by a letter from the permit holder or applicant referring to the letter of credit by number, name of issuing institution, and date, and providing the following information: solid waste identification number, site name, facility name, facility permit number, and the amount of funds assured for liability coverage of the facility by the letter of credit.

## The transmittal letter with the necessary information is provided in Appendix X.

(d). The letter of credit must be irrevocable and issued for a period of at least one year unless, at least 120 days before the current expiration date, the issuing institution notifies both the permit holder and the administrative authority by certified mail of a decision not to extend the expiration date. Under the terms of the letter of credit, the 120 days will begin on the date when both the permit holder and the Office of Management and Finance, Financial Services Division receive the notice, as evidenced by the return receipts.

# Chevron acknowledges the requirements of the citation and the letter of credit provided meets those requirements.

(e). The wording of the letter of credit shall be identical to the wording that follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Chevron acknowledges the requirements of the citation and the letter of credit provided meets those requirements.

### SOLID WASTE FACILITY IRREVOCABLE LETTER OF CREDIT

Secretary
Louisiana Department of Environmental Quality
Post Office Box 4303
Baton Rouge, Louisiana 70821-4303
Attention: Office of Management and Finance,
Financial Services Division

Dear Sir:

We hereby establish our Irrevocable Standby Letter of Credit No. [ ] at the request and for the account of [permit holder's or applicant's name and address] for its [list site identification number,

site name, facility name, and facility permit number] at [location], Louisiana, in favor of any governmental body, person, or other entity for any sum or sums up to the aggregate amount of U.S. dollars [ ] upon presentation of:

- A final judgment issued by a competent court of law in favor of a governmental body, person,
  or other entity and against [permit holder's or applicant's name] for sudden and accidental
  occurrences for claims arising out of injury to persons or property due to the operation of the
  solid waste site at the [name of permit holder or applicant] at [ site location] as set forth in the
  LAC 33:VII.727.A.1.
- A sight draft bearing reference to the Letter of Credit No. [ ] drawn by the governmental body, person, or other entity, in whose favor the judgment has been rendered as evidenced by documentary requirement in Paragraph 1.

The Letter of Credit is effective as of [date] and will expire on [date], but such expiration date will be automatically extended for a period of at least one year on the above expiration date [date] and on each successive expiration date thereafter, unless, at least 120 days before the then-current expiration date, we notify both the administrative authority and [name of permit holder or applicant] by certified mail that we have decided not to extend this Letter of Credit beyond the then-current expiration date. In the event we give such notification, any unused portion of this Letter of Credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by both the Department of Environmental Quality and [name of permit holder/applicant] as shown on the signed return receipts.

Whenever this Letter of Credit is drawn under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [name of permit holder or applicant] in accordance with the administrative authority's instructions.

Except to the extent otherwise expressly agreed to, the Uniform Customs and Practice for Documentary Letters of Credit (1983), International Chamber of Commerce Publication No. 400, shall apply to this Letter of Credit.

We certify that the wording of this Letter of Credit is identical to the wording specified in LAC 33:VII.727.A.1.d.ii.(e), effective on the date shown immediately below.

[Signature(s) and title(s) of official(s)

of issuing institution(s)]

[date]

### iii. Financial Test

(a). To meet this test, the applicant, permit holder, parent corporation of the applicant (corporate guarantor), or permit holder must submit to the

Office of Management and Finance, Financial Services Division the documents required by Paragraph A.2 of this Section demonstrating that the requirements of that Subsection have been met. Use of the financial test may be disallowed on the basis of the accessibility of the assets of the permit holder, applicant, or parent corporation (corporate guarantor). If the applicant, permit holder, or parent corporation is using the financial test to demonstrate liability coverage and closure and post-closure care, only one letter from the chief financial officer is required.

- (b). The assets of the parent corporation of the applicant or permit holder shall not be used to determine whether the applicant or permit holder satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as authorized in Clause A.1.d.iv of this Section.
- (c). The wording of the financial test shall be as specified in Subclause A.2.i.iv.(e) of this Section.

At this time Chevron has chosen the irrevocable standby letter of credit with standby trust fund to comply with the requirements of Section 727; however, in the future we intend to transfer to financial test and corporate guarantee as the mechanism to meet the requirements of Section 727. Financial responsibility documents are provided in Appendix X and are consistent with the format specified in Section 727.A.

#### iii. Corporate Guarantee

(a). A permit holder or applicant may meet the requirements of Paragraph A.1 of this Section for liability coverage by obtaining a written guarantee, hereafter referred to as a "corporate guarantee." The guarantor must demonstrate to the administrative authority that the guarantor meets the requirements in Subparagraph A.2.i of this Section and must comply with the terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Clauses A.2.i.ii and iv of this Section. The terms of the corporate guarantee must be in an authentic act signed and sworn to by an authorized officer of the corporation before a notary public and must provide that:

At this time Chevron has chosen the irrevocable standby letter of credit with standby trust fund to comply with the requirements of Section 727; however, in the future we intend to transfer to financial test and corporate guarantee as the mechanism to meet the requirements of Section 727; therefore, Chevron responses to the required regulations for Corporate Guarantee are below.

(i). the guarantor meets or exceeds the financial-test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subparagraph A.2.i of this Section;

The guarantor, Chevron's parent corporation, meets or exceeds the financial-test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subparagraph A.2.i of this Section.

(ii) the guarantor is the parent corporation of the permit holder or applicant of the solid waste facility or facilities to be covered by the guarantee, and the guarantee extends to certain facilities;

The guarantor is Chevron's parent corporation. The corporate guarantee extends to the Chevron plant located in Belle Chasse, Louisiana.

(iii) if the permit holder or applicant fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences (or both as the case may be), arising from the operation of facilities covered by the corporate guarantee, or fails to pay an amount agreed to in settlement of the claims arising from or alleged to arise from such injury or damage, the guarantor will do so up to the limits of coverage;

If the permit holder (Chevron) fails to satisfy a judgment based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences (or both as the case may be), arising from the operation of facilities covered by the corporate guarantee, or fails to pay an amount agreed to in settlement of the claims arising from or alleged to arise from such injury or damage, Chevron's parent corporation will do so up to the limits of coverage.

(iv). the guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial-test criteria, the guarantor shall send within 90 days, by certified mail, notice to the Office of Environmental Services, Water and Waste Permits Division, and to the permit holder or applicant, that he intends to provide alternative financial assurance as specified in Paragraph A.1 of this Section, in the name of the permit holder or applicant, and that within 120 days after the end of said fiscal year the guarantor shall establish such financial assurance, unless the permit holder or applicant has done so; The guarantor, Chevron's parent corporation, agrees that if, at the end of any fiscal year before termination of the guarantee, they fail to meet the financial-test criteria, they shall send within 90 days, by certified mail, notice to the Office of Environmental Services, Water and Waste Permits Division, and to the permit holder (Chevron), that they intend to provide alternative financial assurance as specified in Paragraph A.1 of this Section, in the name of the permit holder, and that within 120 days after the end of said fiscal year the guarantor shall establish such financial assurance, unless the permit holder has done so.

(v). the guarantor agrees to notify the Office of Environmental Services, Water and Waste Permits Division by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;

The guarantor, Chevron's parent corporation, agrees to notify the Office of Environmental Services, Water and Waste Permits Division, by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding.

(vi). the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial-test criteria or that he or she is disallowed from continuing as a guarantor of closure or post-closure care, he or she shall establish alternate financial assurance as specified in Paragraph A.1 of this Section in the name of the permit holder or applicant unless the permit holder or applicant has done so;

The guarantor, Chevron's parent corporation, agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial-test criteria or that it is disallowed from continuing as a guarantor of closure or post-closure care, it shall establish alternate financial assurance as specified in Paragraph A.1 of this Section in the name of the permit holder (Chevron) unless the permit holder has done so.

(vii) the guarantor agrees to remain bound under the guarantee notwithstanding any or all of the following: amendment or modification of the permit, or any other modification or alteration of an obligation of the permit holder or applicant pursuant to these regulations; The guarantor, Chevron's parent corporation, agrees to remain bound under the guarantee notwithstanding any or all of the following: amendment or modification of the permit, or any other modification or alteration of an obligation of the permit holder (Chevron) pursuant to these regulations.

(viii). the guarantor agrees to remain bound under the guarantee for as long as the permit holder or applicant must comply with the applicable financial assurance requirements of Paragraph A.2 of this Section for the above-listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to the administrative authority and the permit holder or applicant. Such cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the permit holder, as evidenced by the return receipts;

The guarantor, Chevron's parent corporation, agrees to remain bound under the guarantee for as long as the permit holder (Chevron) must comply with the applicable financial assurance requirements of Paragraph A.2 of this Section for the above-listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to the administrative authority and the permit holder. Such cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the permit holder, as evidenced by the return receipts.

(ix). the guarantor agrees that if the permit holder or applicant fails to provide alternate financial assurance, as specified in Paragraph A.1 of this Section, and obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the permit holder or applicant;

The guarantor, Chevron's parent corporation, agrees that if the permit holder (Chevron) fails to provide alternate financial assurance, as specified in Paragraph A.1 of this Section, and obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the permit holder.

(x). the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the permit holder or applicant.

Guarantor also expressly waives notice of amendments or modifications of the facility permit(s);

The guarantor, Chevron's parent corporation, expressly waives notice of acceptance of the guarantee by the administrative authority or by the permit holder. Guarantor also expressly waives notice of amendments or modifications of the facility permits.

(xi). the wording of the corporate guarantee shall be as specified in Subclause A.2.i.ix.(l) of this Section.

The wording of the corporate guarantee is as specified in Subclause A.2.i.ix.(I) of this Section.

(b). A corporate guarantee may be used to satisfy the requirements of this Section only if the attorney general(s) or insurance commissioner(s) of the state in which the guarantor is incorporated, and the state in which the facility covered by the guarantee is located, has submitted a written statement to the Office of Environmental Services, Water and Waste Permits Division that a corporate guarantee is a legally valid and enforceable obligation in that state.

This information has been requested. Copies of the requests are included in Appendix X and responses will be provided when received.

e. The use of a particular financial responsibility mechanism is subject to the approval of the administrative authority.

Chevron acknowledges that the use of a particular financial responsibility mechanism is subject to the approval of the administrative authority.

f. Permit holders of existing facilities must submit, on or before February 20, 1995, financial responsibility documentation that complies with the requirements of Paragraph A.1 of this Section. Applicants for permits for new facilities must submit evidence of financial assurance in accordance with this Section at least 60 days before the date on which solid waste is first received for processing or disposal.

Chevron acknowledges that permit holders of existing facilities must submit, on or before February 20, 1995, financial responsibility documentation that complies with the requirements of LAC33:VII.727.A.1.

- 2. Financial Responsibility for Closure and Post-Closure Care. Permit holders or applicants of Type I, I-A, II, II-A, and III facilities have the following financial responsibilities for closure and post-closure care.
  - a. Permit holders or applicants for processing or disposal facilities shall establish and maintain financial assurance for closure and post-closure care.

## Chevron has elected to use the financial test and corporate guarantee to establish financial assurance for closure and post-closure care.

- b. The applicant or permit holder shall submit to the Office of Environmental Services, Water and Waste Permits Division the estimated closure date and the estimated cost of closure and post-closure care in accordance with the following procedures.
  - i. The applicant or permit holder must have a written estimate, in current dollars, of the cost of closing the facility in accordance with the requirements in these rules. The estimate must equal the cost of closure at the point in the facility's operating life when the extent and manner of its operation would make closure the most expensive, as indicated by the closure plan, and shall be based on the cost of hiring a third party to close the facility in accordance with the closure plan.

# The estimated cost of closing the facility in current dollars (2006) in accordance with the requirements in these rules is provided in Appendix V.

ii. The applicant or permit holder of a facility subject to post-closure monitoring or maintenance requirements must have a written estimate, in current dollars, of the annual cost of post-closure monitoring and maintenance of the facility in accordance with the provisions of these rules. The estimate of post-closure costs is calculated by multiplying the annual post-closure cost estimate by the number of years of post-closure care required and shall be based on the cost of hiring a third party to conduct post-closure activities in accordance with the closure plan.

## The Storm Water Treatment System is an existing unit with plans for clean closure. Hence, this regulation is not applicable.

iii. The cost estimates must be adjusted within 30 days after each anniversary of the date on which the first cost estimate was prepared on the basis of either the inflation factor derived from the Annual Implicit Price Deflator for Gross Domestic Product, as published by the U.S. Department of Commerce in its Survey of Current Business or a reestimation of the closure and post-closure costs in accordance with Clauses A.2.b.i and ii of this Section. The permit holder or applicant must revise the cost estimate whenever a change in the closure/post-closure plans increases or decreases the cost of the closure plan.

The permit holder or applicant must submit a written notice of any such adjustment to the Office of Environmental Services, Water and Waste Permits Division within 15 days following such adjustment.

The cost estimates will be adjusted within 30 days after each anniversary of the date on which the first cost estimate was prepared based on either the inflation factor derived from the Annual Implicit Price Deflator for Gross Domestic Product, as published by the U.S. Department of Commerce in its survey of Current Business or a reestimation of the closure and post-closure costs in accordance with LAC33:VII.727.A.2.b.i. and ii. The cost estimate will be revised whenever a change in the closure/post closure plans increases or decreases the cost of the closure plan. Chevron will submit written notification of any such adjustments to the Office of Environmental Services, Water and Waste Permits Division within 15 days following such adjustment.

iv. For trust funds, the first payment must be at least equal to the current closure and post-closure cost estimate, divided by the number of years in the pay-in period. Subsequent payments must be made no later than 30 days after each annual anniversary of the date of the first payment. The amount of each subsequent payment must be determined by subtracting the current value of the trust fund from the current closure and post-closure cost estimates and dividing the result by the number of years remaining in the pay-in period. The initial pay-in period is based on the estimated life of the facility.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

- c. Financial Assurance Mechanisms. The financial assurance mechanism must be one or a combination of the following: a trust fund, a financial guarantee bond ensuring closure funding, a performance bond, a letter of credit, an insurance policy, or the financial test. The financial assurance mechanism is subject to the approval of the administrative authority and must fulfill the following criteria.
  - i. Except when a financial test, trust fund, or certificate of insurance is used as the financial assurance mechanism, a standby trust fund naming the administrative authority as beneficiary must be established at the time of the creation of the financial assurance mechanism into which the proceeds of such mechanism could be transferred should such funds be necessary for either closure or post-closure of the facility, and a signed copy must be furnished to the administrative authority with the mechanism.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

ii. A permit holder or applicant may use a financial assurance mechanism specified in this Section for more than one facility, if all such facilities are located within Louisiana and are specifically identified in the mechanism.

Chevron acknowledges the above citation.

iii. The amount covered by the financial assurance mechanism(s) must equal the total of the current closure and post-closure estimates for each facility covered.

The amount covered by the financial assurance mechanism does equal the total amount of the current closure and post-closure estimates for each facility covered.

iv. When all closure and post-closure requirements have been satisfactorily completed, the administrative authority shall execute an approval to terminate the financial assurance mechanism(s).

Chevron acknowledges that when all closure and post-closure requirements have been satisfactorily completed, the administrative authority shall execute an approval to terminate the financial assurance mechanism(s).

d. Trust Funds. A permit holder or applicant may satisfy the requirements of this Section by establishing a closure trust fund that conforms to the following requirements and submitting an originally signed duplicate of the trust agreement to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

e. Surety Bonds. A permit holder or applicant may satisfy the requirements of this Section by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

f. Performance Bonds. A permit holder or applicant may satisfy the requirements of this Section by obtaining a surety bond that conforms to the following requirements and submitting the bond to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

g. Letter of Credit. A permit holder or applicant may satisfy the requirements of this Section by obtaining an irrevocable standby letter of credit that conforms to the following requirements and submitting the letter to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

h. Insurance. A permit holder or applicant may satisfy the requirements of this Section by obtaining insurance that conforms to the requirements of this Subparagraph and submitting a certificate of such insurance to the Office of Environmental Services, Water and Waste Permits Division.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

- i. Financial Test. A permit holder, applicant, or parent corporation of the permit holder or applicant, which will be responsible for the financial obligations, may satisfy the requirements of this Section by demonstrating that he or she passes a financial test as specified in this Subparagraph. The assets of the parent corporation of the applicant or permit holder shall not be used to determine whether the applicant or permit holder satisfies the financial test, unless the parent corporation has supplied a corporate guarantee as outlined in Clause A.1.d.iv of this Section.
  - To pass this test, the permit holder, applicant, or parent corporation of the permit holder or applicant, must meet the criteria of either Subclause (a) or (b) below.
    - (a). The permit holder, applicant, or parent corporation of the permit holder or applicant must have:
      - (i). tangible net worth of at least six times the sum of the current closure and post-closure estimates to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test; and
      - (ii) tangible net worth of at least \$10 million; and
      - (iii). assets in the United States amounting to either at least 90 percent of his total assets, or at least six times the sum of the current closure and post-closure estimates, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test.

Chevron has elected to comply with Subclause (b) below; therefore, this subclause is not applicable.

(b). The permit holder, applicant, or parent corporation of the permit holder or applicant must have:

- (i). a current rating for his most recent bond issuance of AAA, AA, A, or BBB, as issued by Standard and Poor's, or Aaa, Aa, or Baa, as issued by Moody's; and
- (ii). tangible net worth of at least \$10 million; and
- (iii). assets in the United States amounting to either 90 percent of his total assets or at least six times the sum of the current closure and post-closure estimates, to be demonstrated by this test, and the amount of liability coverage to be demonstrated by this test.

Chevron has elected to comply with Subclause (b) above. Chevron meets all of the requirements of Subclause (b). Financial test documents demonstrating that Chevron meets these criteria are included in Appendix X.

- ii. To demonstrate that he or she meets this test, the permit holder, applicant, or parent corporation of the permit holder or applicant must submit the following three items to the Office of Environmental Services, Water and Waste Permits Division:
  - (a). a letter signed by the chief financial officer of the permit holder, applicant, or parent corporation demonstrating and certifying the criteria in Clause A.2.i.i of this Section and including the information required by Clause A.2.i.iv of this Section. If the financial test is provided to demonstrate both assurance for closure and/or post-closure care and liability coverage, a single letter to cover both forms of financial responsibility is required;

Chevron acknowledges the above requirement. The required document is provided in Appendix X.

(b) a copy of the independent certified public accountant (CPA)'s report on the financial statements of the permit holder, applicant, or parent corporation of the permit holder or applicant for the latest completed fiscal year;

Chevron acknowledges the above requirement. The required document is provided in Appendix X.

- (c). a special report from the independent CPA to the permit holder, applicant, or parent corporation of the permit holder or applicant stating that:
  - (i). he or she has computed the data specified by the chief financial officer as having been derived from the independently audited, year-

end financial statements with the amounts for the latest fiscal year in such financial statements; and

(ii). in connection with that procedure, no matters came to his attention that caused him to believe that the specified data should be adjusted.

# Chevron acknowledges the above requirement. The required document is provided in Appendix X.

iii. The administrative authority may disallow use of this test on the basis of the opinion expressed by the independent CPA in his report on qualifications based on the financial statements. An adverse opinion or a disclaimer of opinion will be cause for disallowance. The administrative authority will evaluate other qualifications on an individual basis. The administrative authority may disallow the use of this test on the basis of the accessibility of the assets of the parent corporation (corporate guarantor), permit holder, or applicant. The permit holder, applicant, or parent corporation must provide evidence of insurance for the entire amount of required liability coverage, as specified in this Section, within 30 days after notification of disallowance.

Chevron acknowledges that the administrative authority may disallow the use of the financial test as stated above. In the event that the administrative authority disallows the use of the financial test, Chevron will provide evidence of insurance for the entire amount of required liability coverage, as specified in this Section, within 30 days after notification of disallowance. Chevron will also provide evidence of insurance or other acceptable financial assurance mechanism for the entire amount of closure and post-closure cost estimate, as specified in this Section, within 30 days after notification of disallowance.

- iv. The permit holder, applicant, or parent corporation (if a corporate guarantor) of the permit holder or applicant shall provide to the Office of Environmental Services, Water and Waste Permits Division a letter from the chief financial officer certifying the following information:
  - (a). a list of solid waste facilities, whether in Louisiana or not, owned or operated by the permit holder or applicant of the facility, for which financial assurance for liability coverage is demonstrated through the use of financial tests, including the amount of liability coverage;
  - (b). a list of solid waste facilities, whether in Louisiana or not, owned or operated by the permit holder or applicant, for which financial assurance for the closure or post-closure care is demonstrated through the use of a financial test or self-insurance by the permit holder or applicant, including the cost estimates for the closure and post-closure care of each facility;

- (c). a list of the solid waste facilities, whether in Louisiana or not, owned or operated by any subsidiaries of the parent corporation for which financial assurance for closure and/or post-closure is demonstrated through the financial test or through use of self-insurance, including the current cost estimate for the closure or post-closure care for each facility and the amount of annual aggregate liability coverage for each facility; and
- (d). a list of solid waste facilities, whether in Louisiana or not, for which financial assurance for closure or post-closure care is not demonstrated through the financial test, self-insurance, or other substantially equivalent state mechanisms, including the estimated cost of closure and postclosure of such facilities.
- (e). The wording of the letter from the chief financial officer shall be identical to the wording as follows, except that the instructions in brackets are to be replaced with the relevant information and the brackets deleted.

Chevron acknowledges the above requirement. The required documents are provided in Appendix X.

### SOLID WASTE FACILITY LETTER FROM THE CHIEF FINANCIAL OFFICER

(Liability Coverage, Closure, and/or Post-Closure)
Secretary
Louisiana Department of Environmental Quality
Post Office Box 4303
Baton Rouge, Louisiana 70821-4303
Attention: Office of Management and Finance,
Financial Services Division

Dear Sir:

I am the chief financial officer of [name and address of firm, which may be either the permit holder, applicant, or parent corporation of the permit holder or applicant]. This letter is in support of this firm's use of the financial test to demonstrate financial responsibility for [insert "liability coverage," "closure," and/or "post-closure," as applicable] as specified in [insert "LAC 33:VII.727.A.1," "LAC 33:VII.727.A.2," or LAC 33:VII.727.A.1 and A.2"].

[Fill out the following four paragraphs regarding facilities and associated liability coverage, and closure and post-closure cost estimates. If your firm does not have facilities that belong in a particular paragraph, write "None" in the space indicated. For each facility, list the site identification number, site name, facility name, and facility permit number.]

 The firm identified above is the [insert "permit holder," "applicant for a standard permit," or "parent corporation of the permit holder or applicant for a standard permit"] of the following solid waste facilities, whether in Louisiana or not, for which liability coverage is being demonstrated through the financial test specified in LAC 33:VII.727.A.1. The amount of annual aggregate liability coverage covered by the test is shown for each facility:

- 2. The firm identified above is the [insert "permit holder," "applicant for a standard permit," or "parent corporation of the permit holder or applicant for a standard permit"] of the following solid waste facilities, whether in Louisiana or not, for which financial assurance for [insert "closure," "post-closure," or "closure and post-closure"] is demonstrated through a financial test similar to that specified in LAC 33:VII.727.A.2 or other forms of self-insurance. The current [insert "closure," "post-closure," or "closure and post-closure"] cost estimates covered by the test are shown for each facility:
- 3. This firm guarantees through a corporate guarantee similar to that specified in [insert " LAC 33:VII.727.A.2," or LAC 33:VII.727.A.1 and 2"], [insert "liability coverage," "closure," "post-closure," or "closure and post-closure"] care of the following solid waste facilities, whether in Louisiana or not, of which [insert the name of the permit holder or applicant] are/is a subsidiary of this firm. The amount of annual aggregate liability coverage covered by the guarantee for each facility and/or the current cost estimates for the closure and/or post-closure care so guaranteed is shown for each facility:
- 4. This firm is the owner or operator of the following solid waste facilities, whether in Louisiana or not, for which financial assurance for liability coverage, closure and/or post-closure care is not demonstrated either to the U.S. Environmental Protection Agency or to a state through a financial test or any other financial assurance mechanism similar to those specified in LAC 33:VII.727.A.1 and/or 2. The current closure and/or post-closure cost estimates not covered by such financial assurance are shown for each facility.

This firm [insert "is required" or "is not required"] to file a Form 10K with the Securities and Exchange Commission (SEC) for the latest fiscal year.

The fiscal year of this firm ends on [month, day]. The figures for the following items marked with an asterisk are derived from this firm's independently audited, year-end financial statements for the latest completed year, ended [date].

[Fill in Part A if you are using the financial test to demonstrate coverage only for the liability requirements.]

#### PART B. CLOSURE AND/OR POST-CLOSURE

### **ALTERNATIVE II**

ι.	Sum of current closure and post closure cost estimates (total of all cost estimates shown above			
	\$			
2.	Current bond rating of most recent issuance of this firm and name of rating service			
3.	Date of issuance of bond			

4.	Date of maturity of bond  Tangible net worth (if any portion of the closure and/or post-closure cost estimate is included in "total liabilities" on your firm's financial statement, you may add the amount of that portion to this line)  \$				
<b>*5</b> .					
<b>*</b> 6.	Total assets in U.S. (required only if less than 90 percent of the firm's assets are located in the U.S.)				
	\$				
		YES	NO		
7.	Is line 5 at least \$10 million?				
8.	Is line 5 at least 6 times line 1?				
9.	Are at least 90 percent of the firm's assets				
	located in the U.S.? If not, complete line 10.				
10.	Is line 6 at least 6 times line 1?	<del></del>			
(The	e following is to be completed by all firms provi	ding the financial tes	t)		
	I hereby certify that the wording of this letter is	s identical to the wor	ding specified in LAC		
33:\	VII.727.A.2.i.iv.(e).				
[Sig	mature of chief financial officer for the firm]				
(Туј	ped name of chief financial officer]				
[Tit	le]				
[Da	te]				

A letter from the Chief Financial Officer of Chevron that complies with the above requirements is included in Appendix X.

v. For the purposes of Paragraph A.2 of this Section, the phrase "tangible net worth" shall mean the tangible assets that remain after liabilities have been deducted; such assets would not include intangibles such as good will and rights to patents or royalties.

Chevron acknowledges for the purpose of Paragraph A.2 of this Section, the phrase "tangible net worth" means the tangible assets that remain after liabilities have been deducted; such assets would not include intangibles such as good will and rights to patents or royalties.

vi. The phrase "current closure and post-closure cost estimates," as used in Clause A.2.i.i of this Section, includes the cost estimates required to be shown in Division A.2.i.i.(a).(i) of this Section.

Chevron acknowledges that the phrase "current closure and post-closure cost estimates," as used in Clause A.2.i.i of this Section, includes the cost estimates required to be shown in Division A.2.i.i.(a).(i) of this Section.

vii. After initial submission of the items specified in Clause A.2.i.ii of this Section, the permit holder, applicant, or parent corporation of the permit holder or applicant must send updated information to the Office of Environmental Services, Water and Waste Permits Division within 90 days after the close of each succeeding fiscal year. This information must include all three items specified in Clause A.2.i.ii of this Section.

After initial submission of the items specified in Clause A.2.i.i of this Section, Chevron will submit updated information to the office of Environmental Services, Waste Permits Division within 90 days after the close of each succeeding fiscal year. This information will include all three items specified in Clause A.2.i.i of this Section.

viii. The administrative authority may, on the basis of a reasonable belief that the permit holder, applicant, or parent corporation of the permit holder or applicant may no longer meet the requirements of Subparagraph A.2.i of this Section, require reports of financial condition at any time in addition to those specified in Clause A.2.i.ii of this Section. If the administrative authority finds, on the basis of such reports or other information, that the permit holder, applicant, or parent corporation of the permit holder or applicant no longer meets the requirements of Clause A.2.i.ii of this Section, the permit holder or applicant must provide alternate financial assurance as specified in Paragraph A.2 of this Section within 30 days after notification of such a finding.

Chevron acknowledges the above citation. In the event that alternate financial assurance is requested, Chevron will provide documentation of such within 30 days after notification of such request.

ix. A permit holder or applicant may meet the requirements of Subparagraph A.2.i of this Section for closure and/or post-closure by obtaining a written guarantee, hereafter referred to as a "corporate guarantee." The guarantor must be the parent corporation of the permit holder or applicant. The guarantor must meet the requirements and submit all information required for permit holders or applicants in Clauses i-viii of this Subparagraph and must comply with the terms of the corporate guarantee. The corporate guarantee must accompany the items sent to the administrative authority specified in Clauses ii and iv of this Subparagraph. The terms of the corporate guarantee must be in an authentic act signed and sworn by an authorized officer of the corporation before a notary public and must provide that:

- (a). the guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in Subparagraph A.2.i of this Section;
- (b). the guarantor is the parent corporation of the permit holder or applicant of the solid waste management facility or facilities to be covered by the guarantee, and the guarantee extends to certain facilities;
- (c). "closure plans," as used in the guarantee, refers to the plans maintained as required by the Louisiana solid waste rules and regulations for the closure and post-closure care of facilities, as identified in the guarantee;
- (d). for value received from the permit holder or applicant, the guarantor guarantees to the Louisiana Department of Environmental Quality that the permit holder or applicant will perform closure, post-closure care, or closure and post-closure care of the facility or facilities listed in the guarantee, in accordance with the closure plan and other permit or regulatory requirements whenever required to do so. In the event that the permit holder or applicant fails to perform as specified in the closure plan, the guarantor shall do so or establish a trust fund as specified in Subparagraph A.2.d of this Section, in the name of the permit holder or applicant, in the amount of the current closure or post-closure cost estimates or as specified in Subparagraph A.2.b. of this Section;
- (e). guarantor agrees that if, at the end of any fiscal year before termination of the guarantee, the guarantor fails to meet the financial test criteria, the guarantor shall send within 90 days after the end of the fiscal year, by certified mail, notice to the Office of Environmental Services, Water and Waste Permits Division and to the permit holder or applicant that he intends to provide alternative financial assurance as specified in Paragraph A.2 of this Section, in the name of the permit holder or applicant, and that within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless the permit holder or applicant has done so;
- (f). the guarantor agrees to notify the Office of Environmental Services, Water and Waste Permits Division by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming the guarantor as debtor, within 10 days after commencement of the proceeding;
- (g). the guarantor agrees that within 30 days after being notified by the administrative authority of a determination that the guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of closure or post-closure care, he shall establish alternate financial assurance as specified in Paragraph A.2 of this Section in the

name of the permit holder or applicant, unless the permit holder or applicant has done so;

- (h). the guarantor agrees to remain bound under the guarantee, notwithstanding any or all of the following: amendment or modification of the closure plan, amendment or modification of the permit, extension or reduction of the time of performance of closure or post-closure, or any other modification or alteration of an obligation of the permit holder or applicant pursuant to these regulations;
- (i). the guarantor agrees to remain bound under the guarantee for as long as the permit holder must comply with the applicable financial assurance requirements of Paragraph A.2 of this Section for the above-listed facilities, except that the guarantor may cancel this guarantee by sending notice by certified mail to the Office of Environmental Services, Water and Waste Permits Division and the permit holder or applicant. The cancellation will become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the permit holder or applicant, as evidenced by the return receipts;
- (j). the guarantor agrees that if the permit holder or applicant fails to provide alternative financial assurance as specified in Paragraph A.2 of this Section, and to obtain written approval of such assurance from the administrative authority within 60 days after the administrative authority receives the guarantor's notice of cancellation, the guarantor shall provide such alternate financial assurance in the name of the owner or operator;
- (k). the guarantor expressly waives notice of acceptance of the guarantee by the administrative authority or by the permit holder. Guarantor also expressly waives notice of amendments or modifications of the closure plan and of amendments or modifications of the facility permit(s).
- (l). The wording of the corporate guarantee must be as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted.

### SOLID WASTE FACILITY CORPORATE GUARANTEE FOR LIABILITY COVERAGE, CLOSURE, AND/OR POST-CLOSURE CARE

Guarantee made this [date] by [name of guaranteeing entity], a business corporation organized under the laws of the state of [insert name of state], hereinafter referred to as guarantor, to the Louisiana Department of Environmental Quality, obligee, on behalf of our subsidiary [insert the name of the permit holder or applicant] of [business address].

Recitals

- The guarantor meets or exceeds the financial test criteria and agrees to comply with the reporting requirements for guarantors as specified in LAC 33:VII.727.A.2.i.ix.
- 2. [Subsidiary] is the [insert "permit holder," "applicant for a permit"] hereinafter referred to as [insert "permit holder" or "applicant"] for the following solid waste facility covered by this guarantee: [List the site identification number, site name, facility name, and facility permit number. Indicate for each facility whether guarantee is for liability coverage, closure, and/or post-closure and the amount of annual aggregate liability coverage, closure, and/or post-closure costs covered by the guarantee]

[Fill in Paragraphs 3 and 4 below if the guarantee is for closure and/or post-closure.]

- "Closure plans" as used below refers to the plans maintained as required by the Louisiana
   Administrative Code, Title 33, Part VII, for the closure and/or post-closure care of the facility identified in Paragraph 2 above.
- 4. For value received from [insert "permit holder" or "applicant"], guarantor guarantees to the Louisiana Department of Environmental Quality that in the event that [insert "permit holder" or "applicant"] fails to perform [insert "closure," "post-closure care," or "closure and post-closure care"] of the above facility in accordance with the closure plan and other permit requirements whenever required to do so, the guarantor shall do so or shall establish a trust fund as specified in LAC 33:VII.727.A.2.d as applicable, in the name of [insert "permit holder" or "applicant"] in the amount of the current closure and/or post-closure estimates as specified in LAC 33:VII.727.A.2.

[Fill in Paragraph 5 below if the guarantee is for liability coverage.]

- 5. For value received from [insert "permit holder" or "applicant"], guarantor guarantees to any and all third parties who have sustained or may sustain bodily injury or property damage caused by sudden and accidental occurrences arising from operations of the facility covered by this guarantee that in the event that [insert "permit holder" or "applicant"] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by sudden and accidental occurrences arising from the operation of the above-named facilities, or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor will satisfy such judgment(s), award(s), or settlement agreement(s) up to the coverage limits identified above.
- 6. The guarantor agrees that if, at the end of any fiscal year before termination of this guarantee, the guarantor fails to meet the financial test criteria, guarantor shall send within 90 days, by certified mail, notice to the administrative authority and to [insert "permit holder" or "applicant"] that he intends to provide alternative financial assurance as specified in [insert "LAC 33:VII.727.A.1" and/or "LAC 33:VII.727.A.2"], as applicable, in the name of the [insert "permit holder" or "applicant"], within 120 days after the end of such fiscal year, the guarantor shall establish such financial assurance unless [insert "permit holder" or "applicant"] has done so.
- 7. The guarantor agrees to notify the administrative authority, by certified mail, of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming guarantor as debtor, within 10 days after commencement of the proceeding.

- 8. The guarantor agrees that within 30 days after being notified by the administrative authority of a determination that guarantor no longer meets the financial test criteria or that he is disallowed from continuing as a guarantor of [insert "liability coverage" or "closure and/or post-closure care"] he shall establish alternate financial assurance as specified in [insert "LAC 33:VII.727.A.1" and/or "LAC 33:VII.727.A.2"] as applicable, in the name of [insert "permit holder" or "applicant"] unless [insert "permit holder" or "applicant"] has done so.
- 9. The guaranter agrees to remain bound under this guarantee notwithstanding any or all of the following: [if the guarantee is for closure and post-closure insert "amendment or modification of the closure and or post-closure care, the extension or reduction of the time of performance of closure and/or post-closure"] or any other modification or alternation of an obligation of the [insert "permit holder" or "applicant"] pursuant to the Louisiana Administrative Code, Title 33, Part VII.
- 10. The guarantor agrees to remain bound under this guarantee for as long as the [insert "permit holder" or "applicant"] must comply with the applicable financial assurance requirements of [insert "LAC 33:VII.727.A.1" and/or "LAC 33:VII.727.A.2"] for the above-listed facility except that guarantor may cancel this guarantee by sending notice by certified mail, to the administrative authority and to the [insert "permit holder" or "applicant"], such cancellation to become effective no earlier than 90 days after receipt of such notice by both the administrative authority and the [insert "permit holder" or "applicant"], as evidenced by the return receipts.
- 11. The guarantor agrees that if the [insert "permit holder" or "applicant"] fails to provide alternative financial assurance as specified in [insert "LAC 33:VII.727.A.1" and/or "LAC 33:VII.727.A.2"], as applicable, and obtain written approval of such assurance from the administrative authority within 60 days after a notice of cancellation by the guarantor is received by the administrative authority from guarantor, guarantor shall provide such alternate financial assurance in the name of the [insert "permit holder" or "applicant"].
- 12. The guarantor expressly waives notice of acceptance of this guarantee by the administrative authority or by the [insert "permit holder" or "applicant"]. Guarantor expressly waives notice of amendments or modifications of the closure and/or post-closure plan and of amendments or modifications of the facility permit(s).

I hereby certify that the wording of this guarantee is identical to the wording specified in LAC 33:VII.727.A.2.i.ix.(l), effective on the date first above written.

Effective date:
[Name of Guarantor]
[Authorized signature for guarantor]
[Typed name and title of person signing]
Thus sworn and signed before me this [date].

Chevron acknowledges the above citation. The corporate guarantee meets all of the requirements of this Section (LAC33VII:727.A.2.i.ix). The required documentation is included in Appendix X.

j. Local Government Financial Test. An owner or operator that satisfies the requirements of Clauses A.2.j.i-iii of this Section may demonstrate financial assurance up to the amount specified in Clause A.2.j.iv of this Section.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

k. Local Government Guarantee. An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by Paragraphs A.1-2 of this Section, by obtaining a written guarantee provided by a local government. The guarantor must meet the requirements of the local government financial test in Subparagraph A.2.j of this Section, and must comply with the terms of a written guarantee.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

1. Use of Multiple Mechanisms. An owner or operator may demonstrate financial assurance for closure, post-closure, and corrective action, as required by Paragraphs A.1-2 of this Section, by establishing more than one financial mechanism per facility, except that mechanisms guaranteeing performance, rather than payment may not be combined with other instruments. The mechanisms must be as specified in Subparagraphs A.2.d-i of this Section, except that financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care, and/or corrective action may be provided by a combination of mechanisms, rather than a single mechanism.

Chevron acknowledges the above citation; however, Chevron has elected to employ the Financial Test and Corporate Guarantee. Therefore, the above citation does not apply.

m. Discounting. The administrative authority may allow discounting of closure and post-closure cost estimates in Paragraph A.2 of this Section, and/or corrective action costs in Paragraph A.1 of this Section up to the rate of return for essentially risk-free investments, net of inflation, under the following conditions:

Chevron acknowledges the discounting must be conducted in accordance with the above citation; however, Chevron has not elected to use discounting as part of the financial assurance mechanism.

B. Financial Responsibility for Corrective Action for Type II Landfills

Chevron acknowledges the above citation; however, the Storm Water Treatment System is a Type I facility. Therefore, the above citation does not apply.





